1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

along the Paren River, I found a sacred fire-board that had been left behind in one of the houses. It was lying on the ground near the wall, covered with dust, among some seal-bones, old dishes, and scraps of clothing.

The sacred fire-board of the Reindeer Koryak, the "master of the herd" (qaya'-etı'nvıla'n), is kept during the winter in a bag on a pack-sledge or on the covered sledge, which is occupied during travels by the mother and the small children. When the wandering family makes a stop, the sledges are left outside, near the tent. During the summer the sacred fire-board hangs on a cross-beam in the tent.

Besides the articles enumerated above, that are necessary for obtaining fire by drilling, and the bag for the coal-dust, the "master of the herd" of

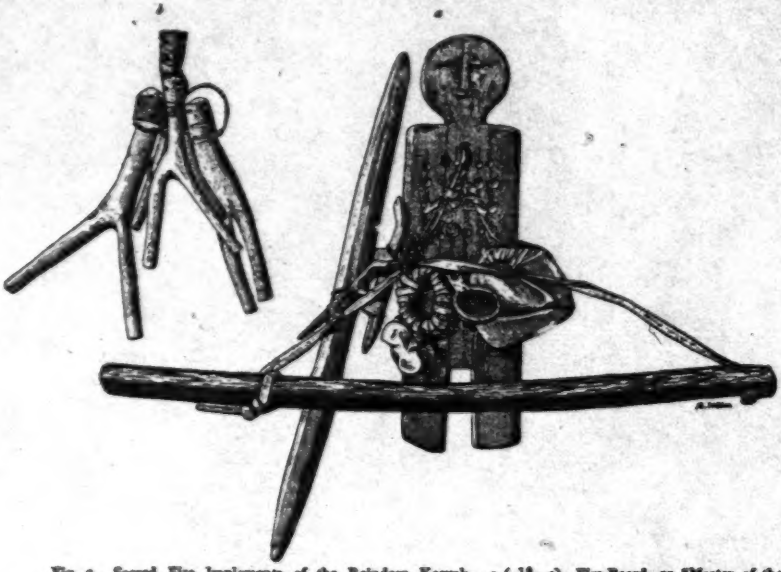

Fig. 3. Sacred Fire Implements of the Reindeer Koryak. *a* (1/11 *a*), Fire-Board, or "Master of the Herd," with Attachments (length of fire-board, 33 cm.); *b* (1/1-1/1), Attachments from a Fire-Board, representing the Assistants of the "Master of the Herd" (length, 10 cm.).

the Reindeer Koryak is also supplied with a lasso, a watch-dog, a sacrificial ladle, an image of a wolf (Fig. 3, *a*), and several little wooden figures. The sacred fire-board keeps the wolf near him to prevent his assailing the herd, while the little forked figures (Fig. 3, *b*) serve as his assistants in guarding the herd, and are called oya'čiku, which properly means "boys," "fellows," although this word has also the meaning of "laborers" and "herdsmen." The sacred fire-board also secures the herd against sickness, and prevents the

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

532 reindeer from straying away, and, as often happens, from getting lost. When
788 a reindeer is slaughtered, the sacred fire-board is taken out and smeared with
233 blood. Instead of a grass collar, the Reindeer Koryak put on it a tie made of the hair from the mane of a reindeer-buck.

Among the Maritime group, as well as among the Reindeer Koryak, the sacred fire-board is connected with the family welfare, and therefore it must not be carried into a strange house. But if two families join for the winter and live in one house, in order to obviate the necessity of procuring fuel for two houses, both take their own charms along into the common house, [428] without risk to their effectiveness by so doing. The sacred fire-board is usually transmitted to the younger son, — or to the younger daughter, provided her husband remains in his father-in-law's house and the brothers establish new houses for themselves or raise separate herds. Often fire-boards are found that have outlasted two, three, or more generations.

778 534 592 THE DRUM. — The drum (ya'yai), which, as will be seen later on, plays an important rôle in ceremonials and shamanistic performances, at the same time ranks with the sacred fire-board as one of the guardians of the household. The drum is the master of the sleeping-apartment where it is kept. Every married couple has a drum of their own. A bride who has her own sleeping-tents also possesses her own drum. The drum is especially held in esteem by the Reindeer Koryak. Just as a herd cannot exist without a sacred fire-board, so a family cannot get along without a drum.

778 342 KAMAKS AND KALAKS. — A large class of guardian charms are called kamaks and kalaks,[1] — the same names as are applied to the hostile spirits described before.[2] It appears from this that these names do not always signify a thing harmful and evil, like the Yakut word abasy'.[3]

In distinction from the evil spirits, this class of "charm-guardians" are often called otkamak, or okkamak; that is, "wooden kamak." By the Maritime Koryak, the most important place among the wooden kamaks is assigned to the one considered as guardian of the inhabited place. It cannot, however, be called "guardian of the village," in the sense of guardian of the community, since the social organization of the Koryak is so loose that the term "community" cannot very well be applied. The wooden kamak (okkamak) is considered rather as a guardian of the habitation. He is also called Nimyo'lhin, which signifies "habitation," and he appears as a guardian or master of it.

The "guardian of the habitation" has the shape of a post, tapering at the top, and sometimes forked, the thinner branch representing the arm of the charm. It is located close to the village, usually on a hill overlooking

[1] The Koryak plural of kamak is ka'maku. Since kamak has been used with an English plural (Bogoras, Anthropologist, p. 631), the English plural has been used here.

[2] See p. 27.

[3] Abasy (*pl.* abasyla'r) means not only "evil spirit," corresponding to the Koryak kala or to the Chukchee kele, but everything harmful in nature.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

137 the height of about 540 metres; while the larch reaches as high as 585 metres.[1] Travellers who have visited northeastern Siberia usually describe the stone-pine as a low, creeping shrub. Slunin says[2] that the stone-pine does not reach more than three feet in height. In most cases this is perfectly true; but on the Taigonos Ridge and on the elevated right bank of the Paren River we saw stone-pines six and seven metres high with a trunk-diameter of forty centimetres, and over. In some places these trees actually formed a dense forest. Sitting on our horses, we could reach out with our hands and pull down the cones filled with nuts, but from the lower branches only. Hence the term "creeping" or "dwarf" cedar could hardly be applied to those particular specimens of the stone-pine.

It may be said, in general, that the territory of the Koryak, especially the inhabited places near the seashore or the tundra, are scantily supplied with trees. Vast forests — deciduous, or coniferous mixed with deciduous varieties — are to be found, as we have seen, on the eastern slopes and branches of the Stanovoi Ridge. Farther east, the forests are confined to river-valleys, and some groves may be found on mountain-slopes and hills. But the forests become still scarcer as we approach Bering Sea. East of the Gishiga, the spaces between the river-valleys are either treeless tundras with a few thin shrubs of willow, alder, Erman birch, mountain-ash, blackberry, and hard carices scattered here and there, or mountains whose slopes are overgrown with dwarf cedar.

824 Thus the western slope of the Taigonos Ridge, the Parapol Valley (which passes in the north into a tundra plain), and the elevated tundra of the Palpal [233] plateau-land, constitute more or less vast tundras covered with moss, and are suitable for reindeer-breeding. The mouths of the rivers and the rocky seashore, where the Maritime Koryak live, are covered with grass, among which there are some gramineous varieties, particularly the *Elymus mollis* Trin., which plays an important part in the Koryak household, and which sometimes reaches the height of a man. Here on the littoral strip we observe a few varieties of sedge-grass, which is used in sacrificial ceremonies, the edible willow-herb (*Epilobium angustifolium*), two varieties of nettle (*Urtica dioica* L. and *Urtica angustifolia* Lebd.), which are used for making thread for plaiting sacks, bags, and nets. For other useful plants the reader is referred to Chapter VIII and X.

313 The lack of woods at the river-mouths is compensated for by the drift-wood carried down from the upper and middle course of the rivers during

[1] It is of interest to add, in connection with this, Slunin's description (I, p. 194) of the eastern slope of the Kamchatka Ridge, between the Karagha and Dranka Rivers, from the coast-line to the summits. He says, "First there is the rolling, wet, treeless tundra, the tundra of the reindeer; a little higher follows a wide strip of stone-pine tundra; still higher up, the mountain-slopes are thinly overgrown with Erman birch, the mountain-summits are sloping and treeless". From this description we draw the conclusion that in that region *Betula Ermanii* forms the vertical limit of arboreal growth on mountains.

[2] See Slunin, I, p. 306.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

It is hardly necessary to say that the species of fish caught by the Koryak are the same as those on the American side of Bering Sea, but they differ from those of the arctic rivers west of the Stanovoi Ridge. There we find mainly the *Coregonidæ*, which ascend the rivers from the polar sea, while in the Koryak waters the *Salmonidæ* (especially of the genus *Oncorhynchus*) are of greatest importance.

INFLUENCE OF CLIMATIC CONDITIONS UPON PROGRESS. — From this brief description of the nature of the region, it may be seen to what extent its form of culture depends upon surrounding conditions. It can hardly be expected that under such a climate the manner of existence can be materially changed. In the far north, material culture depends more upon the degree of latitude than upon human efforts. Agriculture is impossible, because the earth does not thaw out to a sufficient depth; the soil is mostly marshy; and the temperature is too low for the growth of cereals.

In 1901 there were in Gishiginsk only seventy-eight days without frosts, which is not a sufficiently long period for the growth of cereals. This time is in reality still more curtailed, since the growth of cereals does not begin, or stops if already begun, till the temperature is somewhat above the freezing-point. Botanists regard the temperature above 6° C. as a necessary one for the growth of cereals.

Taking into consideration the poor quality of the grasses, and the enormous expanses covered with moss, lichen, and marshes, cattle-breeding as an industry is also impossible. As we shall see below, the efforts of the Russian Administration to develop cattle-breeding among the Russianized Maritime Koryak of Kamchatka and the Okhotsk district — that is, in the more southern parts of the territory — has met with very little success.

The fur-trade cannot be regarded as a means of improving the general welfare of the natives, since, aside from the fact that the profits derived from it remain in the hands of unscrupulous traders, the number of fur-bearing animals is rapidly decreasing, owing to their ruthless destruction.

Fishing and the hunting of sea-mammals, as indicated above, can be carried on in the summer only; so that during the long winter the Maritime population have to depend exclusively upon their summer supplies.

Reindeer-breeding, though affording a more reliable source of sustenance to the wandering Reindeer people than that offered by hunting and fishing to the Maritime people, is still in a most primitive state. The type of a Reindeer household has so far remained unchanged, contact with Russian civilization for a century and a half not having exercised any influence upon it. This primitive state of the material life of the Koryak, left almost intact by outside influence, determines the primitive state of their mental culture.

1: Jochelson E-5 (1900-01; 1908 R14 Koryak R14

III. — HABITAT AND VILLAGES.

WANDERING-PLACES OF THE REINDEER KORYAK. — At the present time, Reindeer Koryak are found mainly in two of the four districts into which, for administrative purposes, the Russians have divided the northeastern part of the Maritime Province; namely, in the Gishiga and Kamchatka districts. Only five families were found in the Anadyr district, while in the Okhotsk district but a few men were left. 131

The greater part of the Reindeer Koryak roam over the Gishiga district. They keep to the interior of the country, and frequent mainly elevated, treeless tundras covered with lichen. During severe frosts they come down to the valleys, where the trees offer protection from the winds, and supply fuel for their fires. In summer the Reindeer Koryak ascend with their herds to the summits or high mountain slopes. The winds that blow freely there, the low temperature, and the never-melting snow of the gorges and ravines, free those locations from mosquitoes, which in summer are so abundant in low and woody places. For the same reason the Chukchee of the extreme north drive their herds in summer to the open tundras of the cold shores of the Arctic Ocean. 233

The Reindeer Koryak usually wander in groups consisting of a few families. There are no definite boundaries between the wandering-places of the various groups. It sometimes happens that separate families wander far from their native places, leaving the groups to which they originally belonged for one reason or another; as, for instance, on account of quarrels, lack of pastures in the old places for their reindeer, or the establishment through marriage of new family ties. I met families on the Palpal Mountains whose native place was on the Taigonos Peninsula, while, on the other hand, among the Taigonos Koryak there are people who have come from the Far East. According to Patkanov's statement, some members of the Opuka Reindeer Koryak are found on the Gishiga River, and a few families of the Gishiga Reindeer Koryak wander on the Palpal Mountains. On the whole, every group has its own wandering-places, though the limits are not well defined. Within this region, single families, or small groups of families, have their chosen places where they spend certain seasons of the year. 621

Thus the Reindeer Koryak form territorial groups. For purposes of taxation the majority of these groups are called "clans" (Роды) by the Russian Administration, and the tribute levied on them was formerly paid off in furs only, but at present they are at liberty to pay either in money or in furs. Elders are appointed for each of these clans. The Koryak themselves do 651 619

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1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

not know the names of the clans. On a part of the Reindeer Koryak, as we shall see later on, no tribute has been levied as yet, and they have not been given any clan-name.

The number of Koryak, Reindeer as well as Maritime, may be gathered from old official data, from those of the 1897 census, and from data collected by Mr. Bogoras and myself. The old official data — reprinted from year to year in the government reports, almost without change — relate to those groups only which were assessed for tribute, and the numbers there given are less than the actual numbers.

The statistics of the census of 1897 are more reliable.[1] This census was supposed to be taken on the same day over the entire empire; but in the sparsely settled districts of Siberia the enumerators spent several weeks covering each territory. Some of the remote places — for instance, the northern part of the Palpal, or the centre of the Parapol Dol — were never visited by enumerators, but they obtained their information second-hand. Nevertheless, the data of the census of 1897 are very nearly correct. The census bulletins of 1897 relating to northern Siberia have been worked up at the Central Statistical Bureau of the Ministry of the Interior in St. Petersburg by S. K. Patkanov, the first editor of that Bureau; but the results have not been published as yet. Mr. Patkanov,[2] however, has published a brief summary, based on the census, of the statistical and geographical data of the palæasiatic tribes, among which are the Koryak. I shall quote further from these data under the name of Patkanov. Mr. Patkanov also had the kindness, at my request, to send me from his material more detailed statistical data on the Koryak, of which also I shall make use.

The data collected by Mr. Bogoras and myself refer merely to those places which we visited personally, and will serve in verifying statistics relating to certain groups only.

We must distinguish the following groups of Reindeer Koryak.

Gishiga District. — 1. The Koryak of the Taigonos Peninsula (Taigono'-talu, i. e., "the people of Taigonos"). They spend the winter seasons along the valleys of the rivers Topolovka (Maka'la^{s}nu-ve'yem[3]), Kilimadja (Kili'-mačwon-ve'yem), Matuga (Ma'tukan-ve'yem), Chaibuga (Poye'm-ya^{s}n-ve'yem), and Avekova (ıļa'taña-ve'yem[4]). Three or four families only roam in winter along the valley of the Gishiga River (Wui'vo-ve'yem[5]). In summer they ascend the mountains where these rivers have their sources. For the purpose

[1] This census was the first general enumeration of the people of the Russian Empire, not for purposes of taxation, but for statistical purposes only.

[2] See Part I, list of authorities quoted, p. 10.

[3] "River of the poplar people," from ma'kan ("poplar"); the Russian word "topol" (тополь) also means "poplar." The banks of this river abound in poplar-groves.

[4] ıļa'taña means "eye-woman."

[5] Wa'ivo formerly meant a fortified settlement, later on it was applied to Russian fortresses and also to Russian houses. Wa'ivon is now the Koryak name of the town of Gishiginsk.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

of fishing, and hunting sea-mammals, a few families only, or members of families, remain during summer, without reindeer, at the mouths of these rivers. Officially these Koryak are called the "Taigonos Clan" (Тайгоносскій родъ).

According to old official statistics (a census taken in 1882 by the chief of the district), there were in this clan sixty-nine families (121 men and 130 women, making a total of 251 persons);[1] according to Patkanov (1897), the number of Taigonos Koryak was 381 persons (202 men, 179 women); while according to my own enumeration (1901), there were seventy-three families (168 men, 150 women, or 318 persons in all). The difference between Patkanov's figures and mine may be accounted for by the fact that, according to information gathered by myself, 97 of the Taigonos clan died of measles in 1900. Adding 97 to 318 would give 415; but at the time of my enumeration about 20 persons from other clans were included. The remaining difference may be ascribed to the natural increase from 1897 to 1900.

2. The three "clans," called by the Administration the First, Second, and Third Gishiga Clans (Первый, Второй, и Третій Гижигинскій родъ). Although they wander in different places, they keep within the limits of a certain area; namely, north of Gishiga and Penshina Bays, between the Penshina and Varkhalam Rivers, and partly on the Parapol tundra to the south of Penshina River. The families of these clans often intermingle; but, as a rule, the First Gishiga Clan wanders principally between the Varkhalam and Paren Rivers and their valleys; the Second, along the Tilqai and Mikina Rivers; and the Third, along the Oklan, a tributary of the Penshina River, and the tundra between the Penshina River and the village of Pustoretsk (Ewle'wun). During the winter some families of the First Gishiga Clan wander with the Tungus up the Varkhalam, Gishiga, and Paren Rivers, across the Stanovoi Ridge, and go as far as the Omolon and Korkodon, tributaries of the Kolyma River.

According to old official statistics, these clans consisted of 423 persons (152 of the First Clan, 167 of the Second, and 104 of the Third). Patkanov's figures show 531 persons (280 men and 251 women).[2] I succeeded in 1901 in enumerating the group of the Second Gishiga Clan only, which roamed along the Tilqai River, consisting of twelve families (or 63 persons) living in five tents. In these five tents 11 persons died of measles in 1900.

3. The Opuka Clan (Опукскій родъ), wandering in the northeastern part of the district, in the northern part of the Parapol tundra, and partly on the Palpal Ridge. According to the old figures there were 206 of them, while according to Patkanov there were 431 persons;[3] but it seems to me that this

[1] According to the census of 1850, the Taigonos clan consisted of 235 persons (104 men, 131 women).

[2] According to Mr. Patkanov's written information, there were in the First Gishiga Clan 115 persons (70 men, 45 women); in the Second, 279 persons (140 men, 139 women); in the Third, 137 persons (70 men, 67 women); but in Mr. Patkanov's published work (see p. 20) the total number for the three Gishiga Clans shows 590 persons.

[3] See Patkanov, p. 20. In his written information Mr. Patkanov gives the total number of this clan as 396 persons (222 men, 174 women).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

184 figure is below their actual number. On the Palpal Ridge the Reindeer
162 Koryak move from place to place together with the Chukchee, and many
233 of them do not pay any tribute.
361 4. The group of the Gishiga district, wandering chiefly upon the Parapol Dol (Парапольскій Долъ), between the rivers Talovka, Lesna, and Vivnik. This group is not recognized at all in the old official reports. According to information gathered by me at second-hand, there are over sixty families in it. Patkanov says (p. 20) that, with reference to 566 Reindeer Koryak of the Gishiga district, there is no indication in the census as to the clan to which they belong; but he does not say in what locality these 566 persons are entered. It is likely that these may be the Koryak of the group here mentioned.[1]

In this connection it should be mentioned, that, according to data gathered by me from the Gishiga archives, there was up to 1850 a Vetvei-Alutor clan of Reindeer Koryak assessed with fur-tribute (yasak); but since that year no tribute has been returned from them. In 1859, at the time of the tenth census "revision" (ревизская сказка), the Russian census taken for fiscal purposes, for purposes of assessment), no trace of this clan could be found, and at present it is not mentioned anywhere.[2] In the archives of 1873 I again came across an inquiry, by the provincial Administration, about this clan of the Reindeer Koryak. In reply to this inquiry, the chief of the Gishiga district reported that the Koryak of this clan had gone to the Reindeer Koryak, near Tighil, of the Petropavlovsk district. The chief of the Petropavlovsk district, in his turn, reported that the clan in question had moved back to the Gishiga district. Since then no mention of this clan has been made in the archives.

Besides the Reindeer Koryak proper of the Gishiga district, enumerated in the above four divisions, there are small detachments of Koryak, who, though wandering with reindeer, do not constitute independent reindeer groups. The families of these detachments are connected by family ties with the inhabitants of one or another of the villages of the Maritime Koryak near which they wander and with which they form an administrative unit. Frequently one part of the family lives in the settlement, while another part wanders with the herd; or a family wandering with reindeer will have in its herd reindeer belonging to relatives living permanently in a settlement. We find this class of Reindeer people in northern Kamchatka and along the shores of Bering Sea. Mr. Patkanov informs me, however, that, according to the census of 1897, 31 Reindeer people (16 men, 15 women) who wander in the valley

[1] According to written statements of Mr. Patkanov, the total number of Reindeer Koryak of the Gishiga district which do not belong to any officially recognized clan is 590 persons (324 men, 266 women). They wander in different localities of the northeastern part of the district.

[2] Mr. Patkanov mentions in his written information a Vetvei clan (Ветвейскій родъ) consisting of 21 persons (8 men, 13 women), but its wandering-place is designated as unknown.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

of Avekova River belong to the Maritime Koryak of the Second Paren clan, and 14 Reindeer people (9 men, 5 women) of Parapol Dol are of the First Kamenski clan. I myself have not heard that the Paren people have relatives among the Reindeer Koryak; but I know three Koryak in the Kamenskoye settlement, who, being traders, have purchased reindeer. However, they themselves do not take them out to pasture, but leave them in the care of permanent Reindeer Koryak.

The total number of Reindeer Koryak of the Gishiga district, united by ties of kinship with the villages of the Maritime Koryak, or originating from them, and considered as belonging to those settlements, consists, according to Patkanov's information, of 461 persons (236 men, 225 women). Detailed numbers of the groups of these Reindeer Koryak will be given in enumerating the villages and clans of the Maritime Koryak of the Gishiga district.

Thus we see that the data relating to the numbers of the Reindeer Koryak of the Gishiga district are both incomplete and contradictory; but it may be said in general that 2389,[1] the total figure of Patkanov for the number of the Reindeer Koryak in the Gishiga district, is approximately correct.

Petropavlovsk District. — The Reindeer Koryak of the Petropavlovsk district wander over the mountains, from the boundaries of the district, almost to the 55th degree north latitude. They may be divided into two groups.

1. The first group, consisting, according to official statistics, of two clans: the First Nomadic Clan (Первый кочевой род) of 272 persons; the Second Nomadic Clan (Второй кочевой род) of 284 persons. This makes a total of 556 persons. According to Patkanov, the first clan consists of 444 persons, and the second of 312 persons, or 756 persons all together.

2. The second group, to which belong 528 Reindeer Koryak enumerated in the census of 1897. These include, according to Patkanov,[2] Reindeer people belonging to the settlements of the Maritime Koryak, and Reindeer Koryak proper who moved thither from the Gishiga district. No detailed information as to the respective numbers of each separate group is given, but it is pointed out that the latter are the more numerous.

In all probability, the Reindeer Koryak proper, or a part of them, who had wandered thither from the Gishiga district, constitute the clan of the Gishiga district, which, as we saw, seems to have disappeared in 1850. As to the Reindeer Koryak of the Petropavlovsk district classed by the Administration as belonging to the settlements of the Maritime Koryak, we find, according to Mr. Bogoras, that there are 61 nomad Koryak belonging to the Lesnovskoye settlement. The total number of Reindeer Koryak in the Petropavlovsk district is, according to the last census, 1284 persons.[3]

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[1] See Patkanov, p. 17. [2] See Patkanov, p. 22. [3] See Patkanov, p. 18.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

V. — REINDEER-BREEDING.

The Beginning of Reindeer-Breeding. — The domestication of wild reindeer is probably of less ancient origin than that of other draught-animals. This is shown by the fact that the domestic reindeer still differ but little from the wild variety. In the prehistoric period the reindeer lived much farther to the south than they do at present. Numerous remains of this species have been found in the palæolithic stations in Switzerland and in France. But the ancient inhabitants of Europe confined themselves to hunting reindeer without making any effort to tame them. As with the passing of the glacial period the climate became milder, the reindeer abandoned central Europe, retreating gradually northward. In Asia, however, the reindeer still occurs as far south as the Amur River, the southern extremity of Saghalin Island,[1] and on the Sayansk Mountains. The wild reindeer are still met with in certain localities in the mountains of Kuznetsk-Alatau Ridge.[2]

Professor Keller, relying on the statement of Professor Frijs of Christiania, that the Lapps of northern Scandinavia were engaged in fishing and hunting as late as the ninth century, and cared for reindeer only as game, admits the possibility that the beginning of the taming of the reindeer does not date farther back than a thousand years;[3] but a period comparatively so short is hardly sufficient for the completion of the difficult undertaking of taming a wild animal.

The process of domesticating wild animals is a gradual one, passing through different stages of taming, and the reindeer are not yet wholly domesticated. The taming of the reindeer presented special difficulties, owing to their low intelligence. Even the most tame and docile reindeer do not recognize their master, and turn off the road if not directed, or unless tied to the sledge ahead of them in the train. Among the reindeer-breeders of northern Europe and Asia, from the Lapps to the Chukchee,[4] we still find

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[1] See P. I. Smidt, The Island of Saghalin (Magazin des Russischen Reiches, [St. Petersburg, April, 1905], p. 155).

[2] They are found there only on the high summits, and by their presence prove that at one time the region passed through the glacial period, at the expiration of which the reindeer retired to the summits. This was pointed out by Prince Peter Kropotkin and Dimitri Klements. The traces of glaciers in the river-systems of the Kuznetsk-Alatau region were made a subject of study by I. Tolmachev. According to the verbal statement of Mr. Klements, Alatau hunters regard the reindeer as a special variety of the wild goat (*Capra*), and call it by the Turanian name Ak-kix, which means "white wild goat" (ak, "white"; kix, "wild goat").

[3] C. Keller, Naturgeschichte der Haustiere (Berlin, 1905), p. 200; Frijs, Wanderungen in den drei Lappländern (Globus, 1872, Vol. XXII, p. 2).

[4] The following tribes are at present engaged in reindeer-breeding, — the Lapps (Scandinavian and Russian), the Zyryans, the Samoyeds, the Ostyak, the Dolgan, the Karagas, the Soyot on the Yenisei, the northern Yakut, the Yukaghir, the Tungus tribes, the Koryak, and the Chukchee. In 1770 the domesticated Scandinavian

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

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different stages of domestication of that animal. The domestic reindeer of the Chukchee and the Koryak are only slightly tamed, and may be regarded as in a primitive stage of domestication. Left to themselves, they readily return to the wild state. On the other hand, we know of no other instances of the domestication of wild reindeer. Thus, the traveller Maak relates an instance in which all attempts to tame captured wild fawns ended in failure.[1] The same is reported by Sieroszevsky,[2] although the offspring of domestic does and wild bucks become tame when reared in a domesticated herd. However, though they are much better runners and much stronger than the offspring of domesticated bucks, they develop an abnormal stubbornness.

It is difficult to solve the question whether reindeer-breeding originated in one place, from which it spread in various directions, or whether different tribes of the northern part of the Old World succeeded independently in the difficult task of domesticating the wild reindeer.

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I. Lippert supports the hypothesis that the German Scandinavians were pioneers in domesticating the northern reindeer, and later imparted their knowledge to the Lapps, from whom the domestic reindeer spread farther east.[3] On the other hand, E. Hahn locates the origin of reindeer-breeding in northeastern Asia,[4] whence, in his opinion, it spread westward.

The latter hypothesis does not seem to me very plausible, because in northeastern Asia, among the Chukchee and the Koryak, reindeer-breeding is even now in a more primitive state than it is in the west. Besides, if northeastern Asia were the birthplace of the domestication of the reindeer, it would be difficult to explain why it spread to the west only, while the Eskimo and the Indians of the extreme north of America remained outside the sphere of influence of this civilizing factor. Both species of the American *Rangifer tarandus* — the barren-ground caribou and the woodland caribou — still remain in a wild state. The Government of the United States, desirous of introducing reindeer-breeding into Alaska, had to import domesticated reindeer from the Old World. If we are to assume that reindeer-breeding had its inception in but one place, Lippert's hypothesis would be the more probable.

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reindeer were introduced into Iceland, and of late years attempts have been made to introduce reindeer-breeding into Alaska. In Iceland the attempt failed completely. The imported reindeer soon returned to the wild state, and now they are hunted only (see Fr. Ekhard, Islands Natur und Volkskunde [Copenhagen, 1813], p. 90). The importation of reindeer into Alaska was begun by the United States Government in 1890. In 1903, when the importation had ceased, the herds in Alaska contained 6114 head. In 1905 they increased to 10,241 head. It is difficult to predict whether or not reindeer-breeding will ultimately prove successful (see G. B. Gordon, Notes on the Western Eskimo [Transactions Department of Archaeology, University of Pennsylvania, 1906, Vol. II, Part I, p. 73]).

[1] Maak, The District of Vilnisk, III, Ethnographical part, p. 154.

[2] Sierossevsky, p. 149.

[3] L. Lippert, Kulturgeschichte der Menschheit, 1886–87, I, p. 541. That the Lapps have learned to tame the reindeer from the Scandinavians is asserted by Professor Frija in the paper mentioned before (Globus, XXII, 1872, p. 2).

[4] E. Hahn, Die Haustiere und ihre Beziehungen zur Wirtschaft des Menschen (Leipzig, 1896), pp. 263, 265.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

The best-trained race of reindeer is that owned by the Lapps, who make use of the watch-dog for guarding their herds. The Lapps, moreover, lay in stores of reindeer-moss,[1] so that the reindeer are better cared for by them than by other reindeer-breeders. All this points to the fact that reindeer-breeding in the extreme west of the Old World is of more ancient origin, since, in the domestication of animals, the more advanced the system, the longer is the period required to develop it.

Schrenck considers the Tungus as primarily a reindeer people, and he advances the hypothesis that they transmitted reindeer-breeding both to the East and to the West, to the Samoyeds and Lapps inclusive.[2] He thinks[3] that the Koryak and the Chukchee may have obtained domesticated reindeer from the Tungus, who came to the polar region from the south.

Bogoras admits the possibility of an influence of Tungus reindeer-breeding in inducing the Koryak and the Chukchee to breed domestic reindeer of their own; but he thinks that they may have tamed wild reindeer which they had found in their own territory, without actually obtaining domesticated animals from the Tungus. "This would seem the more plausible," says Bogoras, "since their reindeer is quite different from that of the Tungus."[4] In support of this hypothesis, the fact could be cited, that, while the Tungus are principally reindeer-riders, the Koryak and the Chukchee use their reindeer harnessed to sledges.

Whatever the origin of reindeer-breeding among the Koryak and the Chukchee may have been, there is no doubt that its development was stimulated by hunting-expeditions into the interior of the country on the part of the maritime inhabitants. In those years when they had no luck in fishing, hunting-expeditions in search of land-animals were more frequently undertaken, and lasted longer. This was necessary for the support of the population. At the same time, a protracted stay of individual hunters, and sometimes of entire hunting-parties, in the interior of the country, led to the taming of wild reindeer or to the acquisition of domesticated reindeer from neighboring tribes. The acquisition of domesticated reindeer or the taming of wild ones insured the people against starvation in case of failure in fishing, and against accidents in hunting land-animals. It also made it possible for certain parts of the tribe to remain entirely in the interior of the country; and it facilitated, moreover, migration from place to place.

The domesticated reindeer not only began to furnish food and clothing, but rendered possible the transportation of tents, household goods, and supplies. In the interior of the country the reindeer proved a more convenient

[1] Schrenck (II, p. 180) once met two reindeer-sledges of Saghalin-Orok loaded with lichens.
[2] Schrenck, II, p. 178.
[3] Ibid., II, p. 176.
[4] Bogoras, The Chukchee, Vol. VII of this series, p. 71.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

draught-animal than the dog. The reindeer found its own food, while the dog required supplies of fish, which could not be had in the interior of the country, especially in the mountains. On the other hand, the reindeer compelled its tamers to begin a nomadic life in search of pastures; and in this manner the more or less settled inhabitants of the maritime and river regions became nomads. This process controverts somewhat the accepted scheme of the development of civilization, in which a settled state is usually considered to denote a higher stage of culture than a nomadic state; while here the nomadic state appears as a later step in the development of Koryak culture.

The taming of the reindeer is undoubtedly a civilizing factor of high order. Still, under given conditions of Koryak life, reindeer-breeding represents primarily *material* progress. The reindeer-breeder is more secure and wealthier than the maritime inhabitant, but, on the other hand, he is coarser. Constant worry connected with the care of his herd, the struggle with nature, and the moving from place to place, claim all the time of the reindeer-breeder, and stunt his mental development. On the contrary, the comparatively warm home of the settled Koryak, and his leisure in winter, stimulate habits of reflection, and develop his mind and his powers of observation. The different forms of primitive art, as we shall see later, are found developed principally among the sedentary Koryak.

It is strange that some travellers have thought that the sedentary Chukchee and Koryak were the descendants of Reindeer nomads who had lost their herds through epidemics or wars. Thus, Krasheninnikoff, Ermann, Dittmar, Kennan, and Slunin say of the sedentary Koryak, that they were formerly reindeer-breeders, but that in the wars with the Chukchee — or through epidemics, as Slunin says — they lost their reindeer;[1] while Sarytcheff, Wrangell, and Schrenck say of the Maritime Chukchee, that they were formerly reindeer-breeders, but, having lost their reindeer through epidemics, left the interior of the country for the coast to engage in hunting sea-animals.[2]

As a matter of fact, several groups of sedentary Koryak, such as the Opuka Koryak, are claimed to have been reindeer-breeders; but, as a rule, reindeer-breeding appears as a higher economic type in the development of material culture than do fishing and hunting. There is no doubt that the remote ancestors of the Reindeer Koryak of to-day were a maritime people, and began to leave the shores for the interior of the country, only after the development of reindeer-breeding. The custom of carrying burdens and children on their backs by means of head-bands, which is still prevalent among the women (see Plate XXXV, Fig. 2, and Plate XXXVI) is a survival of the

[1] See Krasheninnikoff, II, p. 204; Ermann, Reise um die Erde (Berlin, 1838), p. 423; Dittmar, Die Korjaken, pp. 7, 36; Kennan, p. 159; Slunin, I, p. 354. The same is maintained by Professor D. Anuchin (Russian Encyclopaedia of Brockhaus and Efron, Vol. XXVII, p. 151).

[2] See Sarytcheff, Voyage, II, p. 105; Wrangell, II, p. 222; Schrenck, II, p. 25, Note 4.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

time when, in wandering from one place to another, they had to carry their possessions, like the American Indians, on their own persons. 233 174

The fact that, of the three related tribes, — the Chukchee, the Koryak, and the Kamchadal, — the last-mentioned has not developed reindeer-breeding, shows to what extent expeditions into the interior were responsible for the domestication of the reindeer. The land of the Kamchadal consists of a rather narrow peninsula with a long stretch of coast-line, adapted for maritime and river settlements. Hunting-expeditions in search of wild reindeer and mountain-sheep in the mountains of the central Kamchatka range did not take the hunters far away from their settlements. Besides, fish are more abundant in the Kamchatka rivers than in those of the Koryak country, and the food-supply obtained from the sea by the Kamchadal was more regular than that of their northern neighbors. In my opinion, this accounts for the fact that we find no domesticated reindeer among the Kamchadal.

In the Koryak territory the extent of coast-line, in comparison with that of the interior country, is still considerable; but among the Chukchee the interior is extensive as compared to the length of coast-line. Hence I believe the relative as well as the absolute number of Reindeer people is greater among the Chukchee than among the Koryak. According to the census of 1897,[1] 75.6 per cent (9,208 persons) of the total number of Chukchee are reindeer-breeders; while the reindeer-breeders constitute only about 50 per cent of the Koryak (3,748 persons). Bogoras received the impression that in the last few decades reindeer-breeding among the Chukchee has been on the increase.[2] This opinion is supported, among others, by the fact that, during the sixties of the last century, part of the Chukchee reindeer-breeders who before had been wandering in the territory east of the Kolyma River asked permission of the Russian Government to pass over to the western side. They felt crowded in the east. In a few years they spread in the west from the Kolyma to the Indighirka River. 194 233

The same cannot be said of the Koryak. Their reindeer-breeding industry, we have reason to suppose, has increased in the north of the Kamchatka Peninsula in the Parapol Dol. Some groups of the Reindeer Koryak, such as the Koryak wandering along the rivers Oklan and Tılqai, who were formerly wealthy reindeer-breeders, have now become impoverished; while part of the Koryak on the rivers Opuka and Khatırka, who were formerly reindeer-breeders, are now settled. It is true that we also see the reverse process. Some groups of sedentary Koryak have taken to wandering with their reindeer; but that is true only of those Koryak groups[3] which consist of mixed families, nomads and settlers, and which do not possess large herds. The owners of large herds, numbering, perhaps, thousands of heads, 233 178

[1] See Patkanov, pp. 19, 27.
[2] Bogoras, The Chukchee, Vol. VII of this series, p. 72.
[3] See p. 434.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

178 are found only among the genuine Reindeer nomads of the Taigonos Peninsula, the Palpal Ridge, and in the Parapol Dol. It is quite possible, as I 233 said before, that the proportion of Reindeer Koryak has now increased, but that is because a considerable part of the settlements has disappeared as a result of wars and of a high rate of mortality.

114 To answer the question which of the two tribes, the Chukchee or the Koryak, engaged in reindeer-breeding first, is no less difficult to answer. If 233 Schrenck's hypothesis, that these two tribes had obtained the domesticated 174 reindeer from the Tungus, is correct, it would necessarily follow that the nearest neighbors of the Tungus, the Koryak, would be the first to acquire them. But that is just what cannot be maintained.

233 If we turn to the myths, we shall see that they throw little light on this question. The Chukchee myths represent the Koryak as a people engaged 174 exclusively in reindeer-breeding, and the Koryak myths maintain the same thing of the Chukchee. This mutual characterization of the two peoples by their myths reflects the surroundings amidst which they came in conflict at a period when reindeer-breeding had already begun. During that period, wars were waged, principally between the Reindeer Chukchee and the Reindeer Koryak. If, according to Russian annals, the Reindeer Chukchee not only waged war on the Maritime Koryak of Bering Sea, but also penetrated to the shores of the Sea of Okhotsk, there is no indication, on the other hand, that the Reindeer Koryak ever attacked the Maritime Chukchee. The northeastern branch of the Maritime Koryak, the Kerek, may, of course, in times past, have had intercourse with the Maritime Chukchee near the mouth of the Anadyr River; but the Maritime Chukchee on the shores of the Arctic Ocean, and the Maritime Koryak of the Sea of Okhotsk, not only could not have met, but they had as vague an idea of each other as they have to day. The remote maritime people of the north are known among the Maritime Koryak under the name of "Aiwan;" but that is the name under which the Asiatic Eskimo are known on the Chukchee Peninsula.

The myths give no tangible data as to the origin of reindeer-breeding. The appearance of domesticated reindeer is represented in legends rather as an act of special creation. Sometimes they are lowered down from heaven by the Supreme Deity, and sometimes the heroes put life into the wooden figures of reindeer. Most frequently we find, in the myths, tales relating how Big-Raven, or his son Eme'mqut, would pull poles out from the ground, and how reindeer would come out of the holes. According to this account, domesticated reindeer, previous to their appearance on earth, had lived, by the will of the culture-heroes, in the underground world. On the whole, Koryak myths give no hint regarding the process of domestication of the wild reindeer.

The Koryak, like other reindeer-breeders of northern Siberia, have special

1: Jochelson E-5 (1900-01) 1908 Ry4 Koryak RY4

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names for the wild (o'lgolu) and the domesticated (qoya'ñi) reindeer,[1] as if the origin of the domesticated reindeer from the wild had entirely disappeared from the memory of the reindeer-breeders. Thus, it is interesting to note that the stories of the reindeer produced by heroes from holes in the ground are related by the Eskimo and the Indians in connection with the caribou;[2] while the Koryak tell the same tales about the domesticated reindeer.

It is likewise of interest that in Chukchee mythology we find the domesticated and the wild reindeer identified. One of the Chukchee incantations[3] for attracting wild bucks to a domesticated herd is called "The Buck Incantation," or "Incantation for converting Wild Reindeer into Domesticated Ones" (Qaalva't-e'wgan, Kirñat-e'wgan eu'rim). Furthermore, one of the Chukchee myths contains the following story as to the origin of reindeer-breeding.[4]

"Old Creator, having taken on the image of a raven, flew up to the Supreme Deity (Añañ-Va'irgin) and asked him for reindeer for the people. The Deity gave him wild reindeer. The Creator brought them down to earth. The people met the reindeer with cries, which frightened them and caused them to disperse over the tundra. The Creator again went up to heaven and brought down to earth other reindeer, which remained with the people."

According to the Koryak myths, Big-Raven, their ancestor, owned domesticated reindeer. Yet he is represented rather as a Maritime hunter; and the real Reindeer people — the Chukchee and the Tungus, as well as the Koryak reindeer-breeders — are pictured as people strange to him, of low intelligence, and most frequently hostile to him. This divergence between Reindeer and Maritime inhabitants is even more strikingly illustrated in the Chukchee myths, in which ancient Chukchee life is depicted in an exclusively maritime aspect.

Draught and Riding Reindeer. — The Koryak, like the Chukchee, use their reindeer exclusively in harness, and even consider it a sin to ride them. In summer the herdsmen themselves not only walk from one pasture to another, but even carry with them their belongings. Only in localities where the Chukchee and the Koryak live in close proximity to the Tungus, intermarry with them, and interbreed their reindeer in order to make them tamer, do they ride their reindeer, and then principally in the summer, when it is impossible to use sledges, owing to the swamps. Such is the custom of the Koryak on the Varkhalam and Gishiga Rivers, and of the Chukchee near the Indighirka River.

According to the accounts of Lehrberg, cited by Hahn and Keller, the

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[1] Thus, the Yukaghir call the domesticated reindeer "s'ön," and the wild, "to'lou;" the Tungus call the domesticated reindeer "o'ron," and the wild, "buya'n;" and the Yakut call the domesticated reindeer "tabe'," and the wild, "mern'e." The Yakut have another name for the wild reindeer, namely, "tabe'-kël." "Kël" means "a wild animal." This name is probably a translation from the Russian дикій олень.

[2] See Part I, pp. 143, 164, 187, 367.

[3] Bogoras, Chukchee Materials, p. 2.

[4] Ibid., p. 168.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

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Samoyeds of the fifteenth century used to ride their reindeer at that time, but also used them in harness.[1] At present, the Samoyeds, like their neighbors the Ostyak, use the reindeer only in harness, but that does not exclude the possibility of other uses of the reindeer by them in the past.[2] In the opinion of ethnologists, the original country of the Samoyeds extended at one time considerably farther south than at present, or as far as the region of the Sayansk Mountains, whence they were crowded to the north by the Turko-Tartar tribes. Moreover, some of the Samoyed tribes which remained in the Sayansk Mountains and along the upper course of the Yenisei River have become assimilated with the Turks or the Mongols. These tribes include the Tartarized Karagos and Soyot. The small tribe of the Karagos, and part of the Soyot, are still engaged in reindeer-breeding, and use their reindeer for riding only.[3]

But the principal and typical reindeer-riders at present are the Tungus. The use of reindeer by them as pack and riding animals is evidently influenced by the character of the locality in which they live, as well as by their mode of life. The Tungus occupy the most mountainous as well as the most wooded part of northeastern Siberia, and, as typical hunters, they are always wandering about. In summer they have to pass over deep swamps, or to cross not only mountain-streams but also large rivers; and it is exceedingly difficult to cross high mountain ridges, or to penetrate wild, dense woods, with sledges. This necessitates the use of pack and riding animals. For the same reason the Karagos and Soyot, living in mountains not easily accessible, have trained their reindeer to riding. According to the verbal statement of Klementz, the Karagos, in ascending and descending mountains, dismount, and lead their reindeer by the rein. The same is done in the mountains by the Tungus, who take great care of their reindeer when travelling. Being a comparatively frail animal, the reindeer is easily exhausted, or succumbs to bruises and strain. The Tungus, therefore, always see to it that their reindeer are not overworked, and that wounds are not caused by the friction of the saddle and packs.[4]

The Scandinavian Lapps, in spite of the mountainous and woody nature

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[1] E. Hahn, Die Haustiere und ihre Beziehungen zur Wirtschaft des Menschen (Leipzig, 1896), p. 265; Keller, Naturgeschichte der Haustiere (Berlin, 1905), p. 201. On the other hand, Middendorff (Vol. III, p. 494) cites the opinions of Martens (Archiv für Naturgeschichte, 1858, I) and of Marsden (Travels of Marco Polo, 1818, p. 222), which discredit the statements of ancient writers as to reindeer-riding. But the fact that at present, as we shall see further on, some tribes make use of the reindeer as a riding-animal, justifies the conclusion that the *a-priori* reasoning of the writers quoted above, as to the past, has no foundation in fact.

[2] Judging by their epos, the Ostyak used the reindeer as a draught-animal in ancient times as well. At the time described in their legends, reindeer-breeding among the Ostyak was developed to a greater extent, and extended farther south, than at present. See S. Patkanov, The Type of an Ostyak Hero, according to Ostyak Legends and Hero Tales (St. Petersburg, 1891), pp. 34, 35.

[3] My information as to the Karagos and the Soyot was obtained personally from Dr. Dimitri Klements, assistant of the Ethnographic Division of the Museum of Emperor Alexander III., St. Petersburg, who is known for his explorations, principally archæological, in southern Siberia and Mongolia.

[4] Reindeer-riding will be described in detail in the work on the Yukaghir.

1: Jochelson E-5 (1900-01) 1908 Ry4 Koryak Ry4

of their territory, use the reindeer only in harness; but their narrow, canoe-like sledges easily glide along paths that are otherwise hardly passable. Besides, they harness only one reindeer to a sledge, after the manner of the freight-sledges of the tundra Yukaghir, the Chukchee, and the Koryak.

However, some Tungus tribes, when they come in contact with people using sledges, employ their reindeer in harness and for riding, and for carrying packs, or for use in sledges exclusively. Schrenck thought[1] that the Saghalin Orok are the only Tungus tribe which make use of reindeer both for riding and for hauling sledges. According to his opinion, they adopted the idea of using sledges from the dog-breeders, the Gilyak. That is, of course, possible; but, as I have said before, there are other Tungus tribes who use sledges. Thus, all over the extensive northern tundra — between the Kolyma and Lena Rivers, where the Tungus tribes come in contact or intermingle with the Yukaghir or the Yakut — they have in certain cases adopted the sledge-harness without giving up reindeer-riding. The same may be said also of the Tungus living in other parts of the province of Yakutsk. On their trips through the mountains, or on hunting-expeditions, they still use reindeer for riding and for carrying packs; but, for transporting merchandise and mail between post-stations, they hitch their reindeer to sledges. Such contracts, however, are taken up only by rich Tungus who own large herds. In some localities the Tungus have, in later times, begun to train their reindeer to draw sledges. Thus, on the trail between Ola (a bay of the Sea of Okhotsk) and the upper course of the Kolyma River, which was opened only ten years ago, the local Tungus have trained their reindeer, which were formerly used exclusively for carrying packs, to carry goods on sledges. The Dolgan, a Yakutized Tungus tribe in the Yenisei tundra, and the Khangai, a Yukaghirized Tungus tribe in the Kolyma tundra, are now using the reindeer in winter in sledge-harness, and in summer as riding and pack animals.

Races of Northern Reindeer. — In eastern Siberia two principal races are distinguished, both among the wild and the domesticated reindeer. The wild reindeer are divided into mountain and tundra reindeer. The former are characterized by their greater height and the gray or light-gray color of their fur. In summer they retire from the mosquitoes to the summits of the mountains, and in winter they come down to the river-valleys. The tundra reindeer are not so tall, and they have darker hair. They, too, flee from the mosquitoes in summer, but to the shores of the Arctic Ocean and to near-by islands; and in winter they return to the northern forest-line. These migrations are carried out in large herds, which are waylaid by hunters on the Anadyr River and on the lower course of the Kolyma River in the spring and fall when the reindeer cross those streams.

[1] Schrenck, II, p. 179.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak R44

233 136 It is worthy of note that the pregnant females leave for the north ahead of the males, crossing the rivers on the ice, so as to reach the summer places before the fawns are born. One of the distinguishing peculiarities of these two races of reindeer is the form of the hoof. The mountain reindeer have a high, steep hoof; the tundra reindeer, a rather flat, platelike hoof.

The domesticated reindeer are likewise divided into two races, corresponding to the races of the wild reindeer; namely, the Tungus and the Koryak-Chukchee reindeer. The Tungus reindeer is taller in stature, has longer legs, a more elongated muzzle, and hair of a lighter color (mostly gray or reddish gray), than the Koryak-Chukchee reindeer. The body of the Koryak-Chukchee reindeer is larger in proportion to its height. The color of its fur is darker than that of the Tungus reindeer. The hair of the fawns is especially dark; frequently it is black in the fall, and toward winter, as they grow older, it turns somewhat gray. The dark color of their fur seems to me to be caused by the humidity of the climate. In maritime regions the coloring of the reindeer is darker than in the mountains and in the continental climate of the Yakut territory. Among the Koryak-Chukchee reindeer we also meet more frequently with white (as though in contrast with the dark shades) and with dappled reindeer than we do among the Tungus. The spotted skins are highly prized for clothing, and the white ones for funeral dress. Spotted skins are never found among wild reindeer.

All that I have said here about the two races of reindeer is based upon accounts of the natives and on my own superficial observations. Professor Allen, in describing the material furnished by our Expedition, says, however, "Although this material seems considerable, it is insufficient, both in quantity and in character, to enable one to make satisfactory comparisons between the wild and the domesticated animals, or between the two commonly recognized domestic races, — the Lamut and the Chukchee." Further on he says, "The color of these skins is much like that of our eastern woodland caribou, at least, in general effect: the antlers, however, are longer and more slender, and partake more of the Greenland type."[1]

174 233 The domesticated reindeer of the tundra Yukaghir and of the polar Yakut belong to the Tungus race of reindeer. We know that the reindeer-breeding of the polar Yakut is of recent origin, and that they adopted the reindeer from the Tungus; but of the tundra Yukaghir this can hardly be said. It is quite possible that their first reindeer were of the Chukchee race, and that, after amalgamation of the tundra Yukaghir with the Tungus, the reindeer of the former gradually approached more nearly to the type of the Tungus race. A change of that kind may be observed in the reindeer of the Chukchee group which settled but thirty years ago on

[1] Allen, Report on the Mammals collected in Northeastern Siberia by the Jesup North Pacific Expedition (Bulletin of the American Museum of Natural History [New York, 1903], Vol. XIX, p. 126).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

the Yerchen, a tributary of the Indighirka River. It may be observed, in this connection, that the sledge of the tundra Yukaghir belongs to the Koryak-Chukchee type, and not to the Tungus-Yakut type.

DEGREE OF DOMESTICATION. — Next to the Chukchee reindeer, the Koryak reindeer are the wildest, and, but for their gregariousness, it would be difficult to manage them. The number of driving and draught reindeer in each Koryak herd is very small, seldom exceeding that necessary for moving the family. The driving and draught reindeer are more accustomed to man and his habitation, but, after spending a summer with the herd without being used, they return again to their native state. The Koryak reindeer is mainly part of the herd, and feels but little its connection with man and his habitation. Human urine is an essential attraction for the reindeer in a nomad camp in winter.

The Koryak very seldom travel alone or with light supplies; that is, without family, baggage-train, tent, and herd. When stopping over night, the driving and draught reindeer are allowed to join the herd; and in the morning, before starting out for the journey, they are caught by means of a lasso. Whenever I happened to travel by reindeer-sledge without the herd, family, and baggage-train of the drivers, nearly half a day would be spent in trying to catch the reindeer. In spite of the fact that the wilder among the driving-reindeer had yokes suspended from their necks, which dragged before their front-feet and interfered with their running, they managed to get away many miles from the camping-place during the night.

The heavy Koryak tent is less adapted for frequent migrations than that of the Tungus. The herd, after eating all the moss around the tent on a new place, wanders farther and farther away from it. The Tungus are more mobile than the Koryak, and, as soon as the lichen around the camp is eaten, they move to another lichen-covered place. The reindeer must always be near the habitation. Moreover, two or three times during the day, the Tungus herdsmen round up the herd, bringing it close to the tents, so that the reindeer may remain accustomed to people and their habitations. No matter how large a Tungus herd may be, its owners try to ride as large a proportion of the animals as possible. Even the females are laden with packs during migrations, or are made to carry the children and the young. Thus the greater part of the herd is used to the saddle. The smaller a Tungus herd is, the tamer; because in that case all the reindeer are trained to ride, and are more accustomed to man. On the contrary, the Koryak manage a large herd more easily. For that reason the owners of small numbers of reindeer combine their herds into one large one.

When I crossed the Stanovoi Mountains, on my way from Gishiga to the Kolyma River, I had with me in the early part of my journey two Tungus herdsmen with ten pack-reindeer and a few reindeer for slaughter

1: Jochelson E-5 (1900-01) 1908 Ry4 Koryak RY4

233 171 for food.[1] When halting for the night, we took the reindeer to a lichen-covered place, where we left them, and in the morning the herdsmen would bring the reindeer to the camp before our Yakut drivers had had time to find their horses.[2] But, whenever I had occasion to drive Koryak or Chukchee reindeer, the capture of them around the camp consumed so much time that usually we were not able to start on our journey until several hours after rising.

At the appearance of wolves, the Tungus reindeer run straight to camp, as if to seek the protection of man. In a Tungus camp in the Indighirka tundra, I once had occasion at night to observe the reindeer, pursued by wolves, come running into camp with their tongues out, and fall exhausted at the tents. The men ran out with fire-brands in their hands, and the women with frying-pans and copper kettles, beating them with anything they could get hold of, so as to frighten away the wolves with the glare of the fire and the noise of the metallic utensils.

The Yakut have a general reputation as cattle-breeders, and, in comparison with the Koryak reindeer, their reindeer are more tame. An insignificant part of this tribe[3] migrated quite recently, at the time of the invasion of the Yakut territory by the Russians, to the polar region of the Verkhoyansk and Kolyma districts. No doubt, the climatic conditions of the Far North have had a retrogressive effect on the civilization of the Yakut. Where cattle-breeding proved impossible or unprofitable, they turned into fish-eating dog-breeders or reindeer-breeders; but at the same time they tried to adapt their new, more primitive life to the habits of the higher culture which they had acquired under a settled mode of life. Thus the Yakut tried to make their reindeer as tame as possible. I had opportunity to observe Yakut reindeer-breeding all over the north between the Kolyma and Lena Rivers, and was surprised to find how much more gentle, in most cases, were their reindeer than were those of the Tungus. The Yakut have even tried to carry the domestication of their reindeer to the point of teaching them to eat hay; but these attempts have failed. They have not hit upon the idea of laying in a supply of lichen,[4] probably because that would involve too much labor, and would be impracticable with a large number of reindeer.

In summer, when the reindeer live on fresh grass and leaves, many Yakut keep them near the house, instead of driving them off to the mountains, as a protection from the mosquitoes, as is done by the Koryak and

[1] I engaged the Tungus with the reindeer to accompany my caravan for a few days. In order to relieve my pack-horses, they carried part of the provisions, as long as any remained.

[2] As a rule, we stopped for the night in river-valleys, along the banks of which we found grazing for the horses; while the reindeer would be taken by the Tungus to the summits of the mountains.

[3] Of the two hundred and fifty thousand Yakut, only twelve thousand live at present in Verkhoyansk and Kolyma, the northern districts of the Yakut Province. Of these twelve thousand, not more than a fifth have reindeer.

[4] Schrenck once met on Saghalin a reindeer caravan of Orok who had two sledges loaded with lichen, to be used as fodder (see Schrenck, II, p. 180).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

the Tungus, or to the arctic shores, as is the custom of the Chukchee. In the Indighirka tundra I had opportunity to observe how the Yakut reindeer crowded, in summer, about the blinding smoke of the smoke-pits near the houses. To prevent the reindeer from getting burned, or from stepping on the hot cinders, the smoke-pits[1] are fenced in with poles, the tops of which are tied together in a manner that resembles the conical frame of a tent. The Kolyma-Chukchee, in imitation of the Yakut, have tried to introduce smoke-pits; but their wilder reindeer burned their feet, and injured their hoofs, in the fire.

The Yakut dogs do not guard the reindeer, as is the case among the Lapps; but the two kinds of animals get along very well with each other. The dogs become accustomed to the reindeer while young, and the latter are not afraid of them. When the pups begin to bark at a reindeer or to chase it, they are trained, by beating, to distinguish the domesticated animal from the wild one. When a dog is particularly obstinate, one of its legs is caught in the collar, so that the dog has to jump on three legs, and cannot run.

In the Yakut settlements along the lower courses of the Indighirka, Yana, and Lena Rivers, even the draught-dogs are not so hostile to the domesticated reindeer as are the Kolyma and Gishiga dogs. When a nomad Koryak pays a visit to one of those settlements, he usually leaves his reindeer behind, at a certain distance from the village, to which he comes on foot. Only when all dogs in the settlement are tied, will the Koryak venture to enter with his reindeer. In the above-mentioned Yakut settlements, it is a common thing to see people ride up to the houses on reindeer, and only exceptionally ferocious dogs are kept on the chain. According to Yakut custom, the owners of the dogs are responsible for the reindeer injured by them. From my own experience, I know that draught-dogs can be taught by proper training to behave peacefully in the presence of domesticated reindeer.

Along the lower course of the Lena River I also saw reindeer spending their summer in Yakut settlements. To protect them from mosquitoes, long sheds were built in the form of corridors, with entrances on either side, by which the reindeer escaped from mosquitoes and from the heat. Before each of the entrances, smoke-pits, fenced in by poles, emitted smoke. The reindeer were generally put out to pasture at night, when the temperature fell considerably and the mosquitoes hid from the cold in the grass. The mosquitoes disappear at noonday also, when their thin wings are so dried up by the rays of the sun that they easily break. During that part of the day the reindeer also seek shelter from the heat in the shade of the shed. The mosquitoes are especially fierce in the morning and at dusk. Then the rein-

[1] In making a smoke-pit, the Yakut build a fire in the pit, and cover it up with refuse, dung, turf, grass, or leaves, so as to allow the fire to smoulder only, and thus produce a smudge.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 171 deer crowd about the smoke-pits, or stay in the shed. In one household I saw a shed built to accommodate two hundred reindeer. These reindeer were so tame that they would upset my photographic apparatus, and had to be kept at a distance to enable me to photograph them. The Koryak reindeer could not be approached near enough with the apparatus to be photographed, but would scatter in all directions, in spite of the fact that the herdsmen tried to keep them in place.

Not far from Shigansk, on the Lena River, where immense larch-forests cover large areas, I met among the Yakut another type of reindeer-management. These Yakut leave their reindeer in the woods, free from any supervision, during the summer, while they themselves engage in fishing along the islands and on the Lena. In the fall, on the appearance of snow, the reindeer are rounded up. They do not stray far away from the winter dwellings, and it never happens that they get lost during the summer. There are no wolves in the depths of the forests, as in winter they avoid the deep, soft snows of dense woods. The polar wolf lives and propagates mainly on the tundra, amidst the shrubbery, on the outskirts of forests. There he finds in abundance wild reindeer, hares, and, in case of extreme necessity, lemmings. The dense woods of northern Siberia surprise the traveller by the scarcity of animal life and by their deadly stillness.

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Reindeer spending their summer in the woods try to protect themselves from mosquitoes by running back and forth on the outskirts of the forest, thus forming a wide beaten path, or by getting into the water of rivers or lakes. On cloudy days, when the mosquitoes are numerous, the reindeer will spend the entire day in the water up to their necks, and will venture into the pastures only at night to satisfy their hunger and to rest on the grass. In winter the Yakut settlers do not manage so easily with their reindeer. Owing to the lack of food-supplies, they cannot keep them in their winter settlements. During summer, whenever there are Tungus in the vicinity, the Yakut, as a rule, keep their reindeer in a Tungus herd; or a few households get together, and the owners take turns in pasturing them.

On the lower course of the Yana, Omoloi, and Lena Rivers, I saw still another form of reindeer-management. In summer the Yakut reindeer are taken to the mountains by the Tungus or Yukaghir, while the Yakut owners remain on the river, fishing. In winter the herdsmen return to the Yakut houses, and the Yakut divide their supplies of fish with them. The wealthy Yakut, who own large herds of thousands of head, always keep hired Tungus or Yukaghir herdsmen. Of late years, good reindeer herdsmen are developing among the Yakut themselves.

Since the care and the use of a Koryak herd are almost the same as those of a Chukchee herd, I shall not attempt to describe at length the manner of driving, the harness, the sledges, the life of the herdsmen, and the diseases

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

of the reindeer. All that has been described in detail by Mr. Bogoras.[1] I shall confine myself, therefore, to giving some additional information and to indicating some points of difference.

Food of Reindeer. — In summer, as is well known, the reindeer like fresh grass, especially the young sprouts of reed-grass, the leaves of the birch, willow, and poplar, as well as mushrooms. In winter they feed exclusively on lichens;[2] but wherever the horse-tail (*Equisetum scirpoides* Mich.[3]) is to be found, they readily eat it in the winter as well, and frequently prefer it to lichens. But this low-growing weed is found only in certain localities, — in the sandy valleys of mountain-streams, where, in some places, it thickly covers large areas. In spite of the fact that in winter it is covered up with snow, the reindeer discover it by their sense of smell, as they do the lichen. More than once in the winter, I had an opportunity to see, in the mountain-valleys between the Indighirka and Yana Rivers, how ravenously the reindeer devoured that plant. The Tungus told me that they fatten on it, the same as do horses. It retains its juice throughout the winter, and does not dry up like grasses. During the winter the reindeer in the woods also eat lichens growing on trunks of trees.

When the reindeer feed exclusively on lichens, they acquire a special longing for the urine of human beings. This longing attracts them to human habitations. Fig. 63 represents a vessel (qoya'-oča'-lăn, which signifies "the reindeer's night-chamber") made of seal-skin, which every herdsman carries suspended from his belt, and of which he makes use whenever he desires to urinate, that he may keep the urine as a means of attraction in capturing refractory reindeer. Quite frequently the reindeer come running to camp from a far-off pasture to taste of snow saturated with urine, a delicacy to them. The reindeer have a keen sense of hearing and of smell, but their sight is rather poor. A man stopping to urinate in the open attracts reindeer from afar, which, following the sense of smell, will run to the urine, hardly discerning the man, and paying no attention to him. The position of a man standing up in the open while urinating is rather critical when he becomes the object of attention from reindeer coming down on him from all sides at full speed.

Fig. 63 ($\frac{11}{1177}$). Vessel made of Seal-Skin. Length, 15 cm.

While subsisting exclusively on lichens, the reindeer develop also a liking for animal food. This peculiarity has been noticed by many travellers. It

[1] Bogoras, The Chukchee, Vol VII of this series, pp. 80—95.
[2] See p. 399.
[3] See p. 386.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

is said that reindeer catch mice. I myself saw reindeer in our train eagerly seize the skin and other refuse of dried fish that had been thrown away by the drivers.

As I said before, the Reindeer Koryak do not like to roam about without their families;[1] but at certain seasons the herds wander far from camp, and compel the herdsman to follow them. This happens in winter, especially when the weather is exceedingly cold, and in summer, when communication by sledge is interrupted. The dwelling of the Reindeer Koryak then remains fixed in one place for two or three months; while the herd, after eating all the lichens near by, gradually moves farther away. The herdsmen at that time undergo great privations. In winter, food can be brought from the camp to the pasture in sledges, and the sleeping-tent can be transported in the same way; but in summer the herdsmen have to carry their food, bedding, teapots, and kettles. The herd is especially restless in the summer when annoyed by mosquitoes, and the herdsmen must watch day and night lest the reindeer scatter in all directions. Usually the old men, old women, and little children spend the summer on the bank of some river, fishing; while the other members of the camp, including ten-year-old boys and girls, wander about with the herd, assisting the herdsmen.

Sledge and Harness. — Plate xxiv, Fig. 1, represents the owner of a camp in a light sledge, about to leave his old camp; and Fig. 2 represents the front part of the train, ready for departure. The first sledge is occupied by one of the wives of the owner. Then follow other sections of the train. The rear is brought up by the herd with the herdsmen and grown-up boys. Some of them walk, while others drive in sledges drawn by a pair of reindeer or by one reindeer, and in which they ride to round up stray reindeer, and keep them with the herd.

This picture was taken early in April, and, as it shows, most of the reindeer still had their antlers, with the exception of the one in front, whose antlers were sawed off so that the woman could manage it more easily. Some of the reindeer had already cast one of their antlers. The males commence to cast the antlers at the end of November; but the geldings,[2] yearlings, and the barren does, cast their antlers in the month of April. Pregnant does cast their antlers from three to ten days after delivery.

Plate xxv, Fig. 1, represents the camp of a not very wealthy Reindeer Koryak in spring. The herd, consisting of four hundred reindeer, was rounded up to be moved with the camp to another place. The camp consisted of two tents, housing five families, including the owner of the herd,

[1] See p. 480.

[2] Brehm (Vol. III, p. 453, of the Russian translation) says that "the antlers of castrated reindeer always remain in the same position; that is, they preserve them if they happen to be castrated at a time the antlers were on, or they remain without antlers if they happen to be castrated just at the time they cast their antlers." No information is vouchsafed as to where the observation was made; but the error is probably due to the fact that geldings usually cast their antlers much later than normal bucks.

1: Jochelson E-5 (1900-01) 1908 R74 Koryak R74

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FIG. 1. CAMP OF REINDEER KORYAK.

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FIG. 2. REINDEER WITH FAWN.

[Facing p. 484. B]

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 621 his relatives, and herdsmen. Between the Koryak tents my own little tent was pitched. To move the entire camp required from forty to forty-five sledges. The moving of the camp of the Taigonos chief — who has a herd of five thousand reindeer, twelve herdsmen with their families, and three large tents — requires not less than a hundred and fifty sledges. The train is made up as follows: —

484 28 492 First comes the owner in a light sledge drawn by a pair of racing-reindeer. He drives fast, and leaves the train far behind. On the way he looks up pastures, and selects a halting-place. The sledges, loaded with household goods and tent-furnishings, each drawn by one reindeer, are conducted by women. One woman leads a train of seven or eight sledges. The first sledge, in which the woman-driver is sitting, is pulled by a gentle reindeer, usually one that belongs to the woman. This sledge is followed by a covered sledge for children. Next come sledges with clothing, dishes, provisions, bedding, and the tent-covers. The last sledge drags behind it the poles of the tent, since no reindeer follow it. The transportation of the driving-sledges is effected by placing them on top of the baggage in the freight-sledges.

233 Plate XXV, Fig. 2, shows a doe just after delivery (May 7), with the antlers still on.

493 A description of sledges and the points of distinction between the different kinds — such as racing-sledges, driving-sledges (men's and women's), family sledges, freight-sledges, and sledges for carrying the poles of tents — has been given by Mr. Bogoras.[1] Koryak sledges are in no way different from those of the Chukchee. The plan of construction is as follows: —

Instead of straight stanchions there is a series of arches or ribs, the ends of which fit into sockets in the runners, to which they are tied by means of leather strips passing through holes. On these arches, which stand upright and are parallel to one another, a long rectangular frame is placed, having longitudinal and transverse bars forming a grating. The frame is attached to the arches by means of thongs. In racing and riding sledges, these gratings are used as seats. In freight-sledges there is an upright grating all around, and a horizontal grating forms the bottom of the body of the sledge. As in the case of the Chukchee, the riding-sledge of the woman is somewhat larger than that of the man.

The dimensions of the riding-sledges which I collected on my expedition are as follows: —

	Man's Sledge.	*Woman's Sledge.*
Length	216 cm.	228 cm.
Width	39 "	46 "
Height	28 "	37 "
Weight	17.5 lbs.	25 lbs.

[1] Bogoras, The Chukchee, Vol. VII of this series, pp. 89–92.

l:Jochelson E-5 (1900-01)1908 RY4 Koryak RY4

492 a thin pliable rod of willow, which takes the place of a whip. The right reindeer then, as though trying to avoid the blow, pushes the left reindeer to the left. The rod thus used as a whip has a length of from 120 cm. to 130 cm. (Fig. 64). It has a head of antler at the grip end, and a pointed ivory cap at the other, with which the reindeer is prodded on. The Yakut drivers use, instead of a whip, an ordinary pole from three to four metres long,

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Fig. 64 (3711). Reindeer-Whip. Length, 152 cm.

or a willow switch. When the driver thrusts the pole forward to the right of the reindeer, the latter turns to the left. As stated before, the Yakut use only a rein for the reindeer at the right. When the driver pulls the rein lightly, the right reindeer turns to the right, and pulls along the left reindeer. If the driver gives the rein a strong pull, the reindeer turns halfway round, and stops. At halting-points on the road, the driver thrusts the pole into the snow, and ties the rein to it. Then all the rear sledges of the train come to a stop.

In using the driving and racing sledges, the Koryak and the Chukchee drive sitting astride (see Plate XXIV, Fig. 1), while the Yakut sit sideways on the right side of the sledge. Plate XXIV, Fig. 2, shows a Koryak woman leading a train of sledges, and sitting sideways, like the Yakut driver, because she happens to be in a freight-sledge having a grated railing. As a rule, however, a young woman prefers to lead a train of sledges driving her own smart driving-sledge drawn by a pair of her own reindeer.

233 MANAGEMENT OF REINDEER-HERDS. — To pick from a large herd a number of a certain kind of reindeer is a very troublesome task. This must be done, for instance, when reindeer have to be given away with a daughter who is marrying into a strange camp, or when relatives or neighbors who kept reindeer in one herd separate to leave for different places, or when, in spring-time, the owner of the herd takes the pregnant does to a separate pasture.

Whenever this has to be done, all the herdsmen, as well as boys, girls, and children, get together. The scattered herd is collected and driven to one place, where it is surrounded by a chain of watchers, who do not allow the reindeer to disperse. In order not to frighten them, the watchers sit on their heels; but, whenever the reindeer attempt to break through the chain, the watchers jump to their feet, and stop the flight. In the midst of the herd is the owner of the reindeer, who intends to remain on the place, with some assistants. They capture their reindeer one by one with lassos, and tie one front-leg of each one to the corresponding hind-leg by means of a

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

short leather thong. When all the required reindeer are secured in this manner, the watchers drive the herd to one side. 233

The tied-up reindeer remain behind until they are entirely separated from the free reindeer. Then they are driven back to the old pasture. I once witnessed the separation of a large herd, and saw what an amount of trouble this primitive method of surrounding the herd with people gives. Refractory reindeer break through the chain constantly, and lead away the rest of the herd. The fleeing reindeer then have to be rounded up, and returned to the enclosure. If the herd is not large, the enclosure is made of sledges arranged in a semicircle.

The Yakut reindeer-breeders have regular enclosures, made of poles, near their houses. The enclosure is in the shape of a rectangle, the sides of which form high fences, so that the reindeer cannot jump over them. The rectangle is approached at one corner by a long passage, continuing one of the short sides of the rectangle, through which the reindeer are driven. Inside the enclosure, the herdsmen very seldom make use of the lasso, but capture their reindeer with their hands. Such enclosures are to be found at all the polar post-stations of the Yakut territory. Whenever reindeer are required to carry mail or passengers, the entire herd is brought from the pastures inside the enclosure, and, after the necessary reindeer have been selected, the herd is set free. 233 171

The size of reindeer-herds among the Koryak is, in my opinion, greatly exaggerated by some writers. For example, Slunin says that the Koryak herds number from ten to eighteen thousand head.[1] I had an opportunity of seeing some of the herds mentioned by Slunin, and our figures are greatly at variance. For instance, the Koryak Kulo, according to my information, had a herd of not more than three thousand reindeer; while, according to Slunin, it numbered fifteen thousand. 233 114

On my way from the Gishiga to the Kolyma River I spent two days in the camp of a wealthy Tungus by the name of Abraham, whose herd was estimated by Slunin at eighteen thousand head.[2] I myself saw that herd. It was not very large, and I was told that there were eight hundred reindeer in it. It is quite possible that not all of Abraham's reindeer were there, but that part of the herd was elsewhere. Even if we were to multiply by five the number that was given to us, we should get only four thousand, and even that number is too large for the herd of a Tungus breeder in the Gishiga district. In the district of Verkhoyansk I knew a Tungus who had 233

[1] See Slunin, I, p. 634. Krasheninnikoff (II, p. 208) also gives improbable figures concerning the numbers of Koryak reindeer. He says that rich Koryak have from ten to thirty thousand reindeer, and more. The elder Etel Sopliskoff had nearly a hundred thousand head. Kennan (p. 195) gives similar incredible figures. He asserts that the Reindeer Koryak of northern Kamchatka have herds of from eight thousand to twelve thousand head, and one of them had thirty thousand reindeer.

[2] Slunin, I, p. 634.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 three thousand reindeer, and the largest herd that I ever saw near the Indighirka River was estimated at something over five thousand reindeer.

It is true that the Tungus, when speaking to Russians, always underestimate the number of their reindeer, so as to appear poor, since they do not like to kill them for meat, for which the Russians come; but such is not the case with the Koryak. They are very vain and boastful in that respect, and are prone to exaggerate the size of their herds. In the Taigonos Peninsula the chieftain would frequently say to me, "I am a rich man: I am very rich in reindeer." On the contrary, Abraham, the Tungus whom I mentioned above, tried to underrate in my opinion the size of his herd, calling my attention to the fact that it did not belong to him alone, but that all of his relatives had a share in it.

[592] On the Taigonos Peninsula, where the Koryak have mastered the art of counting, I took a census of the reindeer by households (I use the word "household" and not "family," because usually brothers and other relatives keep their herds together). I do not consider the figures that follow absolutely accurate, but they will give an approximate idea of the value of the Koryak reindeer industry.

233 I enumerated sixty-three households, which gave a total of 17,000
592 reindeer. The four largest herds numbered 2,000, 2,500, 3,500, and 5,000
511 head respectively. The remaining households had from five reindeer to eight hundred reindeer each. Thirty-four households, or more than half, had from five to fifty reindeer each. The majority of owners of small herds had no households of their own, but worked as herdsmen for the wealthy reindeer-breeders. Dividing 17,000 (reindeer) by 318 (the total number of Taigonos Koryak), and multiplying the quotient by 3,748 (the total number of Reindeer Koryak), we get 200,000, the probable total of Koryak reindeer.

233 The Koryak reindeer are intended mainly for slaughter. With the
437 exception of a small number used for racing, driving, and as draught-animals
439 in their migrations, the entire herd of a wealthy Koryak serves for consumption in various ways. From his herd he gets meat for food, and skins for clothing and tents, and he exchanges the slaughtered reindeer and their skins for articles of consumption which he does not possess. From the Maritime Koryak he gets by barter walrus and seal thongs, fat, oil, and meat, iron-ware made by their smiths, embroidered funeral dress, and dried fly-agaric. From the Russians he receives in exchange tea, tobacco, bread, printed cloth, and other imported goods. With the hunters he exchanges his reindeer-meat and reindeer-skins for the furs of fur-animals, which he again exchanges with Russian merchants for imported goods.

233 The great mass of the Tungus find in the reindeer merely a means of
171 transportation. The Tungus households which own large herds are not of a uniform type throughout. In the Gishiga district the Tungus household has

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

some of the characteristics of the Koryak. The herd, though, consists mostly of reindeer trained as riding and pack animals, but they are not let out by their owners. Like the Koryak, the Gishiga Tungus have not advanced beyond barter. The poor Tungus, in exchange for squirrel-skins and other products of the chase, receive from their rich fellow-tribesmen riding-reindeer, meat, and skins for clothing. The reindeer-management of a wealthy Tungus in the territory of Yakutsk resembles that of the Yakut reindeer-breeder.

The type of the Yakut reindeer-management is the very opposite of that of the Koryak. The profits from a Yakut herd are not derived from the sale or barter of meat and reindeer-skins, but from the use of the animals for transportation. The wealthy Yakut uses his reindeer for carrying merchandise all over the northern part of the province of Yakutsk, taking furs from the northern districts down to the Aldan River in the south, or to the Lena River in the west (where steamers ply in summer). He takes contracts for carrying the mail, and supplies the post-stations on the main and branch roads with reindeer and drivers. The Koryak reindeer are not adapted to such use. Besides, the Yakut population in the north is greater, trade is more considerable, and intercourse between different parts of the territory is livelier, than in the Koryak territory. In the latter the Russian merchants use dogs almost exclusively in carrying their goods, and hire their drivers mainly in Russian settlements.

The Kolyma merchants tried to avoid the transportation of goods from Yakutsk, or, by the recently opened trail, from Ola, by employing Chukchee breeders with their reindeer-sledges to bring merchandise from Gishiga to Kolymsk. Owing to their low standard of life, the Chukchee charge an insignificant price; and this method has proved cheap, but unreliable and slow.[1] The Chukchee made the trip in their usual fashion, travelling with their families and herds, and making about seven miles a day, so that the trip from Gishiga to Sredne Kolymsk took them about five months. The Yakut reindeer would cover the same distance with the same freight in from twenty-five to thirty days.

Comparing further the two types of use of the reindeer, — that of the Yakut and that of the Koryak, — we find that the respective uses made of the herds generally determine the great differences between the methods of training, composition, value, and profit from the herds.

As already stated, the Yakut originally obtained their reindeer from the Tungus, but they have greatly improved the Tungus breed. At present the Yakut reindeer is larger not only than that of the Koryak-Chukchee, but

[1] The first year the Chukchee received from the merchant who hired them two bricks of tea (according to Gishiga prices, fifty cents) for each sledge drawn by one reindeer for the entire distance from Gishiga to Sredne-Kolymsk. Each sledge carried one package of brick-tea, weighing five and a half pods (about two hundred pounds). For the same weight and distance, the Yakut would have charged five rubles per pud, or 27.50 rubles per sledge (about $ 13.50).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 also in that of the Tungus. I remember one Yakut herd not far from
171 Bulun, on the lower course of the Lena River, which surprised me by the great size of the reindeer. The Yakut have achieved this, first of all, by careful selection. The Yakut reindeer-herd undergoes constant change in its make-up. A wealthy Yakut reindeer-breeder is continually trading or selling his poor or stunted breeders, and buys, wherever he can, large, strong bucks and does, being ready to pay good prices, and thus all the time improving the race. Besides, the Yakut reindeer-breeders make a specialty of selling their trained reindeer for post-stations. The marks of the owners of the reindeer, in the shapes of initials, are branded by the Yakut with red-hot iron seals on the hind-quarters of the reindeer. Quite frequently Yakut reindeer are found marked with several brands, which shows that they have passed through several hands.

233 A Koryak herd undergoes but little change in its make-up, except what
422 is occasioned by natural increase by birth, or by decrease from disease and from slaughter for food. The herd is closely connected with the family cult. The reindeer is the bearer of luck, and the protector of the family. Although the head of the family has control of the herd, it is still considered as the common property of the whole family.[1]

Moreover, each individual member of the family has under his or her own mark a certain number of reindeer which are considered as his or her personal property. Every new-born member of the family, independent of sex, receives, as a gift from the first fawns born after his or her birth, one or more female fawns. In time, under favorable circumstances, these become an entire herd, which are branded with a special mark, distinguishing them from other groups of reindeer in the herd. The Koryak mark of ownership is made on the ear of the reindeer. The operation is performed on the new-born fawn by biting off, or cutting off with a knife, a piece of the ear. The marks of ownership do not differ much. They are in the shape of a straight or curved line, an acute angle, or of two or three incisions in zigzag form. The Koryak readily distinguish their marks, even though they strongly resemble one another.

432 Although of late years wealthy Koryak herd-owners, for the sake of the
233 improvement of their herd, are buying trained reindeer or good breeders
777 from the Tungus, nevertheless they consider it a sin to sell any live reindeer. Reindeer that are sold carry with them the luck of the herd: therefore, when selling their reindeer for slaughter, the Koryak do not part with them alive, but kill them themselves. Under such circumstances, the slaughter of a reindeer that is sold is considered as a sacrifice to the Supreme Deity, and can bring no bad consequences.

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[1] See Chap. XII.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

The relative proportion of males and females in a herd differs in the Koryak and Yakut herds. A Koryak herd is intended principally for slaughter. To prevent the herd from greatly diminishing, the Koryak kill principally the males, young bucks, or old barren females. For this reason the females in a Koryak herd usually are from sixty to seventy per cent of the total number. The Koryak, when speaking of the wealth of a reindeer-breeder, quite often have in mind only the number of grown does, not counting the bucks and fawns.

On the other hand, the Yakut reindeer are principally considered as working-animals; and more value is therefore attached to the bucks, as being the stronger. Only under exceptional circumstances do the Yakut kill reindeer for food; nor do they sell them for food at all, since the meat would prove too expensive. The polar Yakut herdsmen subsist principally on fish with a modicum of imported flour. At times they have horse-meat or beef, cow's butter, and milk, all of which are brought in the winter, in a frozen state, from the more southern Yakut settlements, where cattle-breeding is carried on. The Yakut would rather kill a female than a working buck; and the bucks all work, — not only the geldings, but those kept for breeding also. For that reason, it is quite common to find in a Yakut herd the number of females less than that of the males, the proportion of the former being from forty to fifty per cent. The Yakut harness even the female reindeer, not excepting the pregnant ones. I had occasion to drive pregnant does on the post-road even in April, when they were about to be delivered. In the two types of uses of the reindeer just described we also find a different treatment of the reindeer from the day of their birth.

The period of rut of the domesticated reindeer continues from the end of September until the beginning of November, while delivery takes place between the beginning of April and the end of May. The greatest number of births occurs early in May. Both the period of rut and of the birth of the fawns takes place among the wild reindeer from ten to fourteen days later than among the domesticated race.

In the month of March, usually, the reindeer-breeder separates the pregnant does from the rest of the herd, and keeps them in another pasture. The herdsmen must look out for all the new-born fawns to prevent their freezing to death during the cold nights. I visited at the period of delivery, on May 7, 1901, a herd of does belonging to the Taigonos chieftain. More than half of them had already given birth to fawns. The place was an entirely open, treeless tundra, near the Chaibuga River. The snow, blown about by winter winds, was not deep. During the day it was beginning to thaw from the sun's rays, and here and there black hillocks, and earth covered with lichen, moss, and the previous year's grass, could be seen. The herd was scattered over an enormous area. Each doe seemed to keep apart with

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 her own fawn. Most of the fawns, but recently born (in fact, only one or two days old), were already running about with their mothers, who would run off at every attempt on my part to approach them. In a Yakut herd on the Lena River (1897), I could easily catch the little fawns, since their mothers were not afraid of people.

Almost all the fawns of the Koryak herd mentioned here were of a black or dark-brown color. Of the total number of almost five hundred fawns, I saw but ten or twelve pure white ones, and approximately the same number of dappled ones. I spent about two hours with the herd, during which time two does gave birth to their young. One of them, together with its new-born fawn, is shown on Plate xxv, Fig. 2. I took her picture during delivery, before the appearance of the placenta, when she was lying quiet.

The reindeer does produce young once a year. Not more than two or three barren females can be found in a large herd. When the weather is favorable in the spring, but few of the new-born fawns perish, usually from ten to fifteen per cent; but when the nights are cold, especially if there are snow-storms, many of them freeze to death. In a bleak spring the loss of fawns sometimes reaches as high as thirty per cent or more. On cold nights the Yakut reindeer-breeders place the does with their young in the long sheds described above, which diminishes the mortality of the fawns.

234 171 As a rule, the Koryak do not milk the does. Only on rare occasions, in the entire absence of food on the tundra, and when they do not like to kill the reindeer, do the herdsmen make use of reindeer-milk. The Koryak doe will not allow herself to be milked. The herdsmen throw her down on the ground, and suck the milk from the udder, like fawns. Some Koryak in close proximity to the Tungus have learned to milk the does. The Tungus are very fond of reindeer-milk, and drink it with tea. The milking is done by the Tungus as follows: —

A few men capture the doe and let the fawn come up to her, then suddenly pull it away from the udder, and draw the milk into a wooden basin. Not more than about three cups of milk can be obtained from a doe in a day. The milk is thick, very fat, and sickish to the taste. I thought its flavor resembled that of sheep's milk. The milking of the doe, of course, affects unfavorably the growth of the fawns. The Yakut do not milk their does, and that is one reason why the Yakut reindeer are taller and stronger than those of the Tungus.

435 The value of a Tungus, and especially of a Yakut, herd, is considerably higher than that of a Koryak-Chukchee herd. The price of a Koryak reindeer sold for slaughter varies from two to five rubles. The Russians usually buy slaughtered reindeer from the Koryak for from two to four bricks of tea per head. When buying slaughtered reindeer from the Koryak for food, I generally paid six bricks of tea, which was considered an unusually high price.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

A brick of tea[1] is sold at Gishiginsk (the centre of Russian trade) for fifty kopeks (about twenty-five cents); but, as the distance into the interior from that point increases, the price rises, until it reaches a ruble or more.

I have already stated that the Koryak do not sell their reindeer alive, especially the driving or breeding bucks; but they exchange them for other reindeer. A good Tungus driving-reindeer is usually worth two Koryak reindeer. The Tungus seldom sell their reindeer for slaughter. On my trip from the district of Gishiginsk to the Kolyma River, I bought on the Varkhalam River, in the camp of Abraham, the Tungus I mentioned before, a few reindeer for provisions on the way, and took them along with me. I paid six rubles per reindeer. A good Tungus riding-reindeer is valued at ten rubles. In the north of the Yakut territory, where the wealthy Tungus harness their reindeer to sledges and engage in transportation, a driving-reindeer is valued at from twelve to fifteen rubles. A Yakut draught-reindeer is valued still higher. On the Yana River and at the mouth of the Lena River, a good Yakut draught-reindeer is prized at twenty-five rubles. Not far from Verkhoyansk my dog frightened a team of harnessed post-reindeer. They started off, ran into a tree, and one of them broke its leg. It had to be killed; and by agreement with its owner, I paid him half of the cost of the reindeer, namely, twelve rubles. Since the Yakut will not kill their reindeer, they buy the skins of Chukchee reindeer or of wild reindeer for clothing. Not infrequently Yakut reindeer-herdsmen may be seen dressed in coats made of skins of musk-deer (*Moschus moschiferus*) or mountain-sheep, or of skins of calves of cows, lined with the fur of hares.

A reindeer-herd multiplies very quickly under favorable conditions. Starting with a herd of a hundred females in the second year of their life, when they just begin to breed,[2] and assuming that they, as well as their female offspring, will continue to produce one fawn each per year for the following ten years,[3] and, further, that the number of bucks and does born each year will be the same, we find that in the eleventh year the original herd of a hundred females would have grown to a herd of 11,420 head (5760 does, 5660 bucks). From this calculation it may be seen with what rapidity a reindeer-herd would multiply if its growth were not moderated by mortality among the fawns, by slaughter for meat and skins, and, above all, by epidemics. Barren does are so few, and stillbirths so rare, that these two factors need not be taken into account.

Of the annual offspring, the wealthy Koryak kill about half for meat

[1] A brick of tea usually weighs two and a half Russian pounds (one kilo); but some bricks weigh two pounds, and others two pounds and three-quarters.

[2] Quite often rut sets in among the does the first autumn after their birth, and they become pregnant.

[3] The average life of a reindeer is fifteen years, and the does bear until the end of their lives. Cases of the birth of twins are not rare.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

and skins. The fawns are generally slaughtered in the fall, when they are from five to seven months old. The skins are used for clothing, and are in great demand for barter. Further slaughtering of grown reindeer in the winter by the owners for their own consumption, and for food for the Maritime Koryak and the inhabitants of Russian settlements, affects very unfavorably the growth of the herd. That is why there are so few owners of large herds among reindeer-breeders. Some herd-owners have become impoverished because the Russian officials compelled them to sell large numbers of reindeer for the Russian settlements in times of famine. The smaller a herd is, the more its growth is affected by the slaughter of the reindeer.

After all has been said, the great drawback to the growth of reindeer-herds is the frequent occurrence of epidemics, which, in a few days, may pauperize a rich reindeer-breeder. Detailed information on epidemics and diseases of reindeer has been given by Mr. Bogoras.[1]

It goes without saying, that the Yakut herds are not immune to epidemics; but in other respects the growth of the Yakut herd is much faster. Many Yakut in the Verkhoyansk district who but a comparatively short time ago purchased a few dozen reindeer from the Tungus, and engaged in their propagation, are now wealthy reindeer-breeders.

The Koryak reindeer-breeder has not passed as yet beyond a primitive economic stage; that is, all that he needs for living he derives from his herd. Although the herd of the Koryak may be said to constitute his capital, in so far as the labor of hired herdsmen furthers the accumulation of that capital, the only benefit which he derives from the exchange of reindeer for other things is the acquisition of articles to satisfy the current needs of the family. Under such conditions, the profit derived from a Koryak herd is insignificant. A large number of reindeer are slaughtered annually, — that is to say, part of the wealth is destroyed, — and in exchange for that, the reindeer-breeder seldom gets anything that will serve him for any length of time. We have here a case of most primitive barter.

As opposed to the Koryak, the Yakut reindeer household is founded on a money basis. The reindeer serve here, not only as an article of barter for goods necessary in the household, but as a source of earnings. The income derived from the maintenance of post-stations and the transport of goods is very considerable, and is received in money. Wealthy Yakut herd-owners have considerable capital, and even send deposits to banks. Communication over the entire length of the Government trail from the Aldan River, south of the Verkhoyansk mountain-ridge, to Sredne Kolymsk (a distance of 1350 miles) and over all branch-trails leading from that principal trail, is kept up by the Yakut in winter with reindeer, and in summer on horseback. This

[1] Bogoras, The Chukchee, Vol. VII of this series, pp. 80, 81.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

keep up with the Yakut reindeer, and soon began to pant and fall, in spite of severe beating. We abandoned them one after another, leaving on the trail a few sledges with provisions, and finally reached the station on foot. The Chukchee reindeer were the usual little-trained draught-animals, which made from seven to ten miles a day in nomad trains, walking at an easy gait the entire distance.

COMPARATIVE REMARKS. — In conclusion I wish to sum up the chief peculiarities of the three types of use of the reindeer.

The domestication of the reindeer of the Koryak-Chukchee is very primitive. The economic conditions are still in the simple stage in which the herd serves merely to satify the wants of the family. Its principal object is to serve as a source of supply for food and clothing, the reindeer being kept mainly for slaughter. Transportation is but a secondary purpose of the reindeer.

The Tungus reindeer represent a more advanced type. Their chief use is as a means of transportation over the hunting territory, both as riding and pack animals. The household of the wealthy Tungus herd-owner approaches either the Koryak or the Yakut type, according to its location.

The Yakut reindeer are an improved Tungus race. Their principal use is commercial. They are the chief source of money earnings. The owners of one or two dozen reindeer seldom use them for their own household, but hire out themselves with their teams for the transportation of merchandise; or they rent their reindeer to Yakut contractors for a money consideration.

THE DOMESTICATION OF THE WILD REINDEER. — To what has been said on p. 471 concerning the possibility of taming wild reindeer I wish to add the following remarks.

It has been said that the Amur Tungus domesticate wild reindeer. I consider these reports, which are confirmed by my friend Mr. Sternberg in his review of Bogoras's work on the material culture of the Chukchee,[1] worthy of little credence. If the Amur Tungus could increase their herds by taming wild reindeer, they would surpass in skill the tamers of our zoölogical gardens, who succeed only to a certain degree in taming wild animals. In a personal talk with me on this subject, Dr. Sternberg told me that in the original draught of his manuscript he had written "enticing" instead of "taming," which might refer to the skill of the Tungus in enticing wild reindeer with the help of specially trained domesticated animals. This I know is done also by the Tungus of the Province of Yakutsk, and of the Gishiginsk and Okhotsk districts of the Maritime Province; but in those places it applies only to hunting wild reindeer, and not to capturing them for purposes of taming.

In the districts named, three ways of hunting wild reindeer with the

[1] American Anthropologist, N. S., Vol. VII, 1905, p. 322.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

help of domesticated animals are known. The first is by means of specially trained reindeer, called "hunting reindeer," or man·sčí'k (манышикъ, from manit' [манить], "to entice"), by the Russians, and ondada' by the Tungus. In my travels over northeastern Siberia I had occasion to meet Tungus hunters riding reindeer, who led another reindeer (ondada') by a long line. Above everything else, the ondada' is a good guide: it leads its master through woods and other impenetrable places by the surest paths; directed by its scent and hearing, it brings him to the pasture of wild reindeer. Then the hunter pays out the line, and lets the man·sčí'k go ahead, while he himself hides behind a bush or hill. The man·sčí'k begins to dig in the snow to get some lichen. When the wild reindeer, noticing the man·sčí'k, and impelled by love of gregariousness, approaches, the hunter begins gently to draw in the "enticer," until the wild reindeer, following step by step, gradually comes within easy range of the hunter. The second method is employed by the Tungus in the autumn during the rutting-season of wild reindeer. The hunter starts out on his expedition with his best two stags, the strongest in the herd. Having found the tracks of a herd of wild reindeer, the hunter lets one stag loose, after having tied a thong in several loops around its antlers. Feeling itself free, the rutting stag, taking the scent of the tracks of the wild dams, runs to overtake them. The wild stag does not allow his adversary to approach the females, but engages in single fight with him, and becomes entangled in the thong. The hunter, mounted on the other stag, finds the combatants with their antlers entangled, and slays the wild reindeer. Sometimes he succeeds also in killing a female, which, according to the hunters, watches from afar the struggles of the males, and takes flight only on the approach of man. The third method consists in enticing wild stags in the autumn by means of domesticated dams. This method is resorted to in wooded localities that are free from wolves. Having found a pasture of wild reindeer, the hunter leaves there, alone and unguarded, some dams from his herd, which are then in their rutting-period. The dams attract the wild stags. A day or two later the hunter stealthily approaches his dams, and endeavors to shoot the wild reindeer that have imprudently gone too near them. The Koryak, too, take advantage of the wild stags visiting the tame dams in their herds, and slay them, while the Chukchee consider it an ill omen if in such cases the wild stag escapes from the herd. It will thus be seen that the principle in all three methods is to kill the wild reindeer; and in the last method it is also desired to obtain a stronger and larger breed from the domesticated dams.

Mr. W. D. Nemirovich-Danchenko, in two articles on "The Mezen Tundra", and "The Country of the Lapps",[1] informs us that the Samoyed are not able to tame the wild reindeer of the Mezen Tundra, but that the Lapps

[1] Picturesque Russia (Russian), St. Petersburg 1881; Vol. I, pp. 95, 178.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

233 224 114 succeed easily with those of their country, by catching them with the lasso and keeping them tied up for three days before feeding them. After that treatment, he says, the reindeer are as tame as those of the domesticated herd. Presumably this report is based on a misunderstanding and refers to the first training of unbroken reindeer that are taken out of the herd.

233 171 I discuss the possibility or impossibility of taming wild reindeer thus fully, because the answer to this question is of the utmost importance not only from the point of view of the economic interests of the reindeer-breeders, but for the history of domestic animals in general. It is true that the domesticated reindeer differs little from the wild reindeer. So far, zoölogists have found no anatomic differences which would justify us in considering the domesticated reindeer as a distinct variety. From this it may perhaps be inferred that reindeer-breeding is of comparatively recent origin; but the fact must also be taken into consideration that the reindeer-breeders know hardly anything of artificial selection, and that domestication was not accompanied by changes in the feeding of the animals. However this may be, the more pacific nature, the familiarity with man (so to speak) and the readiness to obey him, which we find even in the primitive race of the Chukchee-Koryak reindeer, do not develop at once. These qualities are gradually acquired, and are transmitted by inheritance through a whole series of generations. This applies all the more to the race of Tungus reindeer. The comparative weakness of the reindeer is an advantage to man in the taming of this animal, which could not be accomplished by superior physical strength alone. I have already cited an instance of how the draught-reindeer of a primitive Chukchee herd, when first put into harness with Yakut reindeer, might be beaten to death, but could not be made to draw the sledge as fast as the Yakut reindeer do.[1] Should a wild stag, notwithstanding its innate fear of man, join the herd, attracted by the dams, there would be danger of the herd-owner, however vigilantly he might keep watch, losing a large part of his herd, which the wild stag would probably lead away into the wilderness. The invariable custom of the Chukchee of killing the wild reindeer attracted to the herd by sexual instinct appears to me to have been called into existence in a great measure by this very apprehension, and hence this custom is invested with a religious significance. When I consider reindeer-breeding as of recent origin, I still do not mean to assign to it a beginning very near to our times. The Chukchee-Koryak cult related to the domesticated reindeer, with its numerous rites and festivals, required much time for its evolution and establishment. As it is a matter of great importance, from the point of view both of science and of domestic economy, for reindeer-breeders really to be able to increase their herds by the taming of wild reindeer, let us hope that

[1] See p. 497.

1: Jochelson E-5 (1900-01) 1908 R94 Koryak R94

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future investigators of the reindeer-breeding tribes will pay to this interesting and important question the attention which it deserves.

171

In connection with the question of the occurrence of cases of taming wild reindeer, I will mention the account of a certain Yukaghir, quoted by Bogoras,[1] concerning the taming of wolves, and of their use in harness with dogs. I, too, have heard this story among the Yukaghir of the Lower Kolyma, and, like Bogoras, I consider it a myth.

I will give another example showing how a mythical episode may turn into an account of a real event. We know from the Koryak myths that the evil spirits (kalau) keep herds of mountain-sheep (*Ovis nivikola* Eschholtz) instead of reindeer.[2] Now, Dittmar tells as a real fact, which evidently he had heard from the Kamchadal, that a group of Kamchadal from the river Moroshechnaya, fled into the mountains in order to free themselves of the necessity of paying fur-tribute, and that they wandered about there with a small herd of mountainsheep tamed by them.[3]

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[1] Bogoras, The Chukchee, Vol. VII of this series, p. 101.

[2] See Part I, p. 241.

[3] See Dittmar, Reisen in Kamtchatka, p. 413 (Russian translation, p. 356).

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

stone hammer or with a blow of the back of a large knife. On journeys, frozen raw meat, cut into thin slices is eaten; but reindeer-meat is generally eaten cooked. At present meat is cooked in iron or copper kettles. In winter, especially in the tents of wealthy reindeer-breeders, these kettles always hang over the fire in the outer tent, full of hot broth, which is not served on the table at the regular meals, but is used at all hours for quenching the thirst. Whoever wants a drink takes a small ladle and dips out some of the broth from the kettle. The herdsman, on coming home from the pasture, straightway refreshes himself with broth. The kettle is not cleaned. Meat, intestines, reindeer-tongues, and other parts of the animal, left from the previous cooking, are thrown into the broth. The meat is cooked for a short time, for the Koryak do not like it well done. The kettle is full of dirt from the hands of the cooks, and of reindeer-hair, which drops in with the unwashed meat; but that does not prevent the broth from being a refreshing drink. When the liquid in the kettle runs too low, water is added or snow is thrown in. Thus the kettle is kept full until the camp is broken up to be moved to another place. The women serve cooked meat in the inner tent. After it has been cut into pieces, it is placed on boards, wooden platters, or troughs. The Koryak take hold of a chunk of meat with the left hand, and, holding it with their teeth, cut off a mouthful with a knife held in the right, cutting from below upward. All Siberian natives eat meat in the same manner. For journeys, meat-cutlets are made of raw meat by pounding meat and reindeer fat with a stone hammer. If edible roots are at hand, they are added.

However, the food of the Reindeer Koryak does not consist of reindeer-meat alone. To a considerable degree they resort to the fish and sea-food of the Maritime Koryak; just as the latter, in winter, purchase reindeer from the Reindeer Koryak. Wealthy reindeer-breeders who wander far from the sea-coast, use almost no fish at all, and even less sea-mammals. They catch fish only in summer in mountain-rivers in small nets or weirs, but do not store it up for winter. Besides, the catch in mountain-rivers is insignificant.[1] They eat sea-food and dog-salmon only when people from the coast import them, or when one of their own number visits the coast in winter.

Those who own small herds of reindeer and do not tend the herds of wealthy herd-owners, but wander about alone, must procure supplies of fish for winter, since they cannot afford to kill many reindeer. These poor reindeer-breeders go out in summer to the mouth of some river or to the sea-coast, and there dry fish for winter use. On occasion they also kill sea-mammals, but usually they own no skin boats, and do not go out to sea to hunt. Some wealthy reindeer-breeders — for instance, those on the west

[1] See pp. 529, 534.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

side of the Taigonos Peninsula, who wander with their herds near the Russian villages or near the main trail, and are often visited by Russians on their dog-sledges — send out in summer several members of their families to prepare a supply of sun-dried fish for winter use, and for food for their guests and for their dogs, that they may not have to kill too many reindeer for this purpose. A whole small reindeer suffices for but a single feeding of a team of ten or twelve dogs.

Generally speaking, the Reindeer Koryak are very fond of eating dried dog-salmon and "sea-morsels," (i. e., the meat and blubber of sea-mammals). They seek every opportunity to satisfy this craving, which is possibly a survival from a period when the present nomadic reindeer-breeders were still maritime hunters. As soon as the snow is in good condition for driving, the Reindeer Koryak begin to appear on sledges in the villages of the Maritime Koryak to obtain "sea-food," and barter entire carcasses of frozen seal, oil, dog-salmon, and skin of the white whale. Each Reindeer Koryak has among the Maritime people a friend who supplies him with sea-food, and who, in his turn, later on visits the nomad camp of the Reindeer Koryak to get reindeer-meat.

With all the craving of the Reindeer Koryak for the "sea-morsels," they dislike subsisting long on sea-food. Thus a wealthy Taigonos reindeer-breeder told me that his sons had lived too long on the coast; subsisting on fish and seal alone, and had become completely worn out. He then went to his herd and killed a reindeer for them, that they might regain their strength. On the other hand, the Maritime Koryak like to obtain reindeer meat and fat, even when they have plenty of fish; while in winter, when fishing is poor, they often visit the nomad camp of the Reindeer Koryak either to buy reindeer-meat or to obtain it by begging.

In describing bird-hunting,[1] I mentioned that its economic importance is slight. The Koryak do not like sea-gulls, and consider them tasteless; but when food is scarce, they do not disdain them. Early in summer, previous to the fishing-season, the Maritime Koryak eat all kinds of sea-fowl; but when fishing and sealing begin, bird-hunting ceases. The Koryak are very fond of birds' eggs. During the nesting-season they undertake expeditions to the islands in skin boats to gather eggs, which are collected by hundreds and eaten boiled right after they have been gathered, or on the following days. They do not discriminate between new-laid and rotten eggs. Once I was present when some Koryak were eating boiled eggs which were so decomposed that a strong odor was noticeable a long way off. In many eggs there were already half-hatched birds, but this did not in the least prevent the Koryak from relishing their food.

[1] See p. 557.

1: Jochelson E-5 (1900-01) 1908 RY4 Koryak RY4

in the common use of the skin boat, if he remains in the same village. In case of the death of the father or of a childless brother, the brother who keeps house for himself receives a portion of the inheritance, even if his brother's widow passes on to another, younger brother. I have already said that girls, on marrying into other families, take with them nothing but their clothes. The reindeer which the bride takes along are often delivered by her kinsfolk to her father-in-law, not immediately after the wedding, but according to the most convenient moment, considering what season is most favorable for the welfare of the herd.

The reindeer are the property of all the members of the family, but the movements of the herd are directed by the father. According to custom, each newly born child, irrespective of sex, receives one reindeer-heifer or more with a special mark on the ear.[1] This gives each member of the family a share in the herd later on. Under favorable conditions, a whole herd may be formed by the yearly increase of the herd of these heifers, before the child is ready to marry. Of course, the original herd belongs to the father; but considering that each child has its own reindeer, and that the wife and daughters-in-law retain as their property the reindeer which they brought in marriage, the whole herd of a large family belongs to a group of interrelated proprietors, under the direction of the eldest male. This elder may be the eldest brother or paternal uncle. On the father's death, the original herd is divided up among the sons, and, in the absence of children, among the brothers of the deceased. At marriage, daughters usually receive a share of the original herd from their father, in addition to their own reindeer. Some Koryak divide their deer equally among their sons and daughters, and give a proportionate part to the daughter at the time of her marriage;[2] but then the daughter is no longer entitled to inherit part of the herd on her father's death. If an unmarried girl is at home when her father dies, her brothers give her the reindeer at the time of her marriage. If a wife leaves her husband or is cast out by him, her relatives take back her reindeer. I have already said that divorces are very rare. After the birth of children, who are heirs to both their mother's and father's reindeer, the husband manages his wife's reindeer more independently. In general, the eldest member of the family manages the common herd of the family entirely without control. He designates which reindeer are to be killed for meat, clothing, sacrifices, and sale. He oversees the pasture and herdsman, and picks out the reindeer to be trained for harness. Of course, he often consults his wife or eldest son.

The parting of brothers, or the separation of a married son from the

[1] See p. 492.

[2] In Tale 86 Yiñea-ñeut marries Magpie-Man. They eat up all the reindeer which Big-Raven had given them. Yiñea-ñeut comes to her father to ask for food; and Big-Raven says, "You ate your share of reindeer, I have nothing else to give you" (Part I, p. 259).

11: Kennan--181-182 T-3 (1865) 1870 Koryak
116, 131, 233, 621 Reindeer

"The Wandering Koraks of Kamtchatka, who are divided into about forty different bands, roam over the great steppes in the northern part of the peninsula, between the 58th and 63rd parallels of latitude. Their southern limit is the settlement of Tigil, on the west coast, where they come annually to trade, and they are rarely found north of the village of Penzhina, two hundred miles from the head of the Okhotsk Sea. Within these limits they wander almost constantly with their great herds of reindeer, and so unsettled and restless are they in their habits, that they seldom camp longer than a week in any one place. This, however, is not attributable altogether to restlessness or love of change. A herd of four or five thousand reindeer will in a very few days paw up the snow and eat all the moss within a radius of a mile from the encampment, and then, of course, the band must move to fresh ground. Their nomadic life, therefore, is not entirely a choice, but partly a necessity, growing out of their dependence upon the reindeer. They must wander or their deer will starve, and then their own starvation follows as a natural consequence. Their unsettled mode of life probably grew, in the first place, out of the domestication of the reindeer, and the necessity which it involved of consulting first the reindeer's wants; but the [182] restless, vagabondish habits thus produced have now become a part of the Korak's very nature, so that he could hardly live in any other way, even had he an opportunity of so doing."

11: Kennan--185-186 T-3 (1865) 1870 Koryak-1-2
116, 233, 283, 492 Reindeer

"Snatching hurriedly a few bites of hard bread and bacon by way of breakfast, I donned fur hood and mittens, and crawled out through the low doorway to see how twenty trained deer were to be separated from a herd of four thousand wild ones.

Surrounding the tent in every direction were the deer belonging to the band, some pawing up the snow with their sharp hoofs in search of moss, others clashing their antlers together and barking hoarsely in fight, or chasing one another in a mad gallop over the steppe. Near the [186] tent a dozen men with lassos arranged themselves in two parallel lines, while twenty more, with a thong of seal-skin two or three hundred yards in length, encircled a portion of the great herd, and with shouts and waving lassos began driving it through the narrow gantlet. The deer strove with frightened bounds to escape from the gradually contracting circle, but the seal-skin cord, held at short distances by shouting natives, invariably turned them back, and they streamed in a struggling, leaping throng through the narrow opening between the lines of lassoers. Ever and anon a long cord uncoiled itself in air, and a sliding noose fell over the antlers of some unlucky deer whose slit ears marked him as trained, but whose tremendous leaps and frantic efforts to escape suggested very grave doubts as to the extent of the training. To prevent the interference and knocking together of the deer's antlers when they should be harnessed in couples, one horn was relentlessly chopped off close to the head by a native armed with a heavy sword-like knife, leaving a red ghastly stump from which the blood trickled in little streams over the animal's ears. They were then harnessed to sledges

in couples, by a collar and trace passing between the forelegs; lines were affixed to small sharp studs in the headstall, which pricked the right or left side of the head when the corresponding rein was jerked, and the equipage was ready."

11: Kennan--188-189 T-3 (1865) 1870 Koryak
116, 233, 237 Reindeer

"I could not but admit the inestimable value of the reindeer to his wandering owners. Besides carrying them from place to place, he furnishes them with clothes, food, and covering for their tents; his antlers are made into rude implements of all sorts; his sinews are dried and pounded into thread, his bones are soaked in seal oil and burned for fuel, his entrails are cleaned, filled with tallow, and eaten; his blood, mixed with the contents of his stomach, is made into 'manyalla;' his marrow and tongue are considered the greatest of delicacies; the stiff, bristly skin of his legs is used to cover snow-shoes; and finally his whole body, sacrificed to the Korak gods, brings down upon his owners all the spiritual and temporal blessings which they need. ... It is a singular fact, however, that the Siberian natives--the only people, so far as I know, who have ever domesticated the reindeer, except the Laps--do not use in any way the animal's milk. Why so important and desirable an article of food should be neglected, when every other part of the deer's body is turned to some useful account, I cannot imagine. It is certain, however, that no one of [189] the four great wandering tribes of North-eastern Siberia, Koraks, Chookchees, Tungoos, and Samóotkees, uses in any way the reindeer's milk."

11: Kennan--216 T-3 (1865) 1870 Koryak
116, 233, 432, 825 Reindeer

"Among the many superstitions of the Wandering Koraks and Chookchees, one of the most noticeable is their reluctance to part with a living reindeer. You may purchase as many dead deer as you choose, up to five hundred, for about seventy cents apiece; but a living deer they will not give to you for love nor money. You may offer them what they consider a fortune in tobacco, copper kettles, beads, and scarlet cloth, for a single live reindeer, but they will persistently refuse to sell him; yet, if you will allow them to kill the very same animal, you can have his carcass for one small string of common glass beads. It is useless to argue with them about this absurd superstition. You can get no reason for it or explanation of it, except that 'to sell a live reindeer would be "atkin"—bad.' As it was very necessary in the construction of our proposed telegraph line to have trained reindeer of our own, we offered every conceivable inducement to the Koraks to part with one single deer; but all our efforts were in vain. They could sell us a hundred dead deer for a hundred pounds of tobacco; but five hundred pounds would not tempt them to part with a single animal as long as the breath of life was in his body. During the two years and a half which we spent in Siberia, no one of our parties, so far as I know, ever succeeded in buying from the Koraks or Chookchees a single living reindeer. All the deer which we eventually owned—some eight hundred—we obtained from the Wandering Tungoos."

11: Kennan--217-218 T-3 (1865) 1870 Koryak-1-2
116, 233

"The Koraks are probably the wealthiest deer-owners in Siberia, and consequently in the world. Many of the herds which we saw in Northern Kamtchatka numbered from eight to twelve thousand; and we were told that a certain rich Korak, who lived in the middle of the great 'Toondra,' had three immense herds in different places, numbering in the aggregate thirty thousand head. The care of these great herds is almost the only occupation of the Koraks' lives. They are obliged to travel constantly from place to place to find them food, and to watch them night and day to protect them from wolves. Every day, eight or ten Koraks, armed with spears and knives, leave the encampment just before dark, walk a mile or two to the place where the deer happen to be pastured, build themselves little huts of trailing pine branches, about three feet in height and two in diameter, and squat in them throughout the long, cold hours of an arctic night, watching for wolves. The worse the weather is, the greater the necessity for vigilance. Sometimes, in the middle of a dark winter's night, when a terrible northeast storm is howling across the steppe in clouds of flying snow, a band of wolves will make a fierce, sudden attack upon a herd of deer, and scatter it to the four winds. This it is the business of the Korak sentinels to prevent. Alone and almost unsheltered on a great ocean of snow, each man squats down in his frail bee-hive of a hut, and spends the long winter nights in watching the magnificent Auroras, which seem to fill the blue vault of heaven with blood and dye the earth in crimson, listening to the pulsating of the blood in his ears and the faint distant [218] howls of his enemies the wolves. Patiently he endures cold which freezes

mercury into solid lumps, and storms which sweep away his frail shelter like chaff in a mist of flying snow. Nothing discourages him; nothing frightens him into seeking the shelter of the tents. I have seen him watching deer at night, with nose and cheeks frozen so that they had mortified and turned black; and have come upon him early cold winter mornings, squatting under three or four bushes, with his face buried in his fur coat, as if he were dead."

17:Antropova E-4 (no date) 1964 RY4 Koryak RY4

sea hunting with reindeer-breeding. The remaining 7 groups of Koryaks—the Kamentsy, Parentsy, Itkantsy, Apukintsy, Kereks, Karagintsy and Palantsy—also maintained complex economies, with one or another occupation predominating.

Koryak reindeer-breeding was of two types. The first type—the keeping of large herds—existed among the Chavchuvens. In the early part of the 20th century, a small group of reindeer-breeders owned large herds, accounting for up to 80% of the total number of head. In the area of the Penzhina River, some reindeer-breeders owned 2-3 herds, adding up to as many as 10,000 reindeer. The pasturing of the large herds owned by the rich Koryaks was done by poor Koryaks who owned only a few reindeer or none at all, and were compelled to tend their master's herds in exchange for food and clothing.

The reindeer provided the principal item of the reindeer-breeders' diet—meat, and the basic material for clothing and housing—hides, as well as tendons, of which thread was made. At the same time, the reindeer was to the reindeer-breeders the sole means of transportation. Hence, the entire life of the reindeer-breeding Koryaks was adapted to the demands of their basic occupation. In winter, the herd grazed near the encampment. As soon as the pasture was exhausted, the master drove out in a light sled, similar to that of the Chukchi and harnessed to a pair of deer, to search for another pasture. After that, the entire camp migrated to the new site, and the herdsmen drove the herd to the new pasture. Such migrations took place 4-5 times during the winter. In the spring, before the calving (in April), the females were separated from the rest of the herd. Calving time (May) was the hardest period for the reindeer-breeders. The newborn calves had to be protected from predators—wolves, foxes, wolverines and ravens, and also kept from freezing. At this time, the herdsmen had no rest either by day or by night. They were helped by members of their families, and even old men and children took part in guarding the herd in encampments where the human population was small. Afterwards, the herdsmen drove the herds for the whole summer into the mountains, which abounded in pasturelands. The correct choice of the summer pasture determined the welfare of the herd for the entire year. Summer pasturing required from the reindeer-breeder great skill, experience, and knowledge of the tundra and the reindeer's requirements. The encampment was situated at this period in a summer site, usually on the bank of a river abounding in fish. In autumn (at the end of September and beginning of October), the herdsmen brought the herd to the encampment. Meeting of the herd—one of the principal holidays of the reindeer-breeders—was attended by numerous rituals. After the first snow, the herd and the camp migrated to the winter range.

The herding was done without dogs, which the Koryak reindeer-breeders did not use. Nimble feet, alert eyes and a leather lasso requiring great skill of the herdsmen—these were the means at his disposal to protect the herd from snowstorms and wolves in winter, from foxes and ravens in spring, during the calving season, and from mosquitoes and gnats in summer.

Another type of reindeer-breeding—that of small herds—existed among the Alyutortsy Koryaks. More than 50% of all the Alyutortsy kept reindeer, but few had herds as large as 1000 head. A characteristic feature of Alyutor reindeer-breeding was the use of dogs as the principal sled animals. Each household had one, two, three or more teams. Reindeer were used only for short trips without loads.

This type of reindeer-breeding was usually combined with sea hunting and fishing. All the Alyutortsy, with rare exceptions, went out on sea hunts, especially in spring, when they hunted on drifting ice floes. In summer,

In summer, during the fish-runs, all reindeer-breeding Alyutortsy migrated to the mouths of rivers, where they lived with their sedentary kinsmen and worked with them, preparing stocks of fish for the winter. The reindeer herds remained at this time in the care of herdsmen—the boys of the family. This second type of Koryak reindeer-breeding originated much later than the first.

The hunting of sea animals (various species of seal and white whale) was the principal occupation of the northern sedentary Koryaks, who lived on the coast of Penzhina Bay: Kamentsy, Parentsy, Itkantsy. It also played an important role among the rest of the sedentary Koryaks: the Kereks, Apukintsy, Palantsy, Karagintsy, and sedentary Alyutortsy.

Sea hunting was done during two seasons: spring and fall. The spring season began in mid-March and ended in the latter part of June.

The hunters, armed with rifles and spears, drove out in parties of 78 men, or more, by dogsleds on the sea ice, 5 to 10 kilometers from shore. The seals, which climbed out on the ice, were shot with rifles. The kill was loaded on the sled, and the hunters returned to their village either the same or the following day, after a night on the ice. In a party of 78 men, 2 usually had guns, while the rest brought in the catch, loaded it on the sled and transported it; some were simply onlookers. In May, when open water appeared among the ice floes, sea hunting was done in baydars (skin boats).

The fall season began in mid-September and ended in the latter half of November. The fall hunting was also done in baydars and barkasy [flat-bottomed plank boats]. The animals were caught with nets of sealskin strips.

Long ago, the Koryaks hunted whales. According to legends and literary sources of the 18th century, the hunt was conducted with a huge net, woven of thick strips of leather. Large stones were used as sinkers. The net was attached to coastal cliffs and crags. Dozens of baydars, each with more than 10 hunters, armed with harpoons, sailed out into the sea. The hunters drove the whale into the net, in which it became entangled. The heavy sinkers made it impossible for the whale to swim out into the sea with the net. The hunters showered him with spears. Wounded and exhausted, the whale died, and the hunters joined forces to pull him ashore. The Alyutortsy also used joined boats instead of baydars in hunting whales.

The skins of sea animals were used for straps and boot-soles. The meat and blubber were eaten and stocked. The blubber also provided light. To the Kamentsy, Parentsy and Itkantsy, the products of sea hunting—blubber, skins, and sometimes meat as well—served as the principal media of barter with the reindeer-breeders, from whom they obtained deerskins and meat.

Fishing had long been the main occupation of the eastern sedentary Koryaks of the Bering Sea coast: the Karagintsy, the sedentary Alyutortsy and the Apukintsy. Fishing was also important to the western sedentary Koryaks—the Palantsy, and the northern ones—the Kereks—and somewhat less for the settled Koryaks on the Penzhina—Kamentsy, Parentsy and Itkantsy. Fishing was done throughout the summer and early fall season—from mid-June to the middle of September.

The most widespread method of fishing was by means of barriers. The river was fenced off from either bank with two barriers of stakes and twigs. At the place where they met, the fishermen attached under the water a chiruch (a sack-net) or a "muzzle," made of strips of wood, laths or twigs. Such barriers were set in shallow places, where the fishermen could work during shoal runs without boats or kungasy [sailboats]. The "muzzles" were emptied several times a day. During the heavy runs of fish (Siberian salmon and other migrating salmon species), the Koryaks moved to the mouths of rivers. Here groups of households combined into cooperatives and fished

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relations, especially among the coastal Koryaks. Thus, related families of Alyutortsy combined in summertime for common fishing. The catch was divided equally among them. Their sea hunting was also collective. From seven to eight persons went out to hunt together. On returning to the village, they divided the meat and fat of the seals killed during the hunt in equal shares among all the residents of the village; only the skin of the bearded or common seal went to the man who killed it. Kamentsy also shared equally the meat and fat of the seal they hunted in common, but sometimes the owner of the boat took a larger share.

The reindeer-breeding Alyutortsy also combined into 4-6 kindred families, which nomadized and herded their deer in common. These were productive associations of a temporary nature, similar to the temporary associations of fishermen and sea hunters.

According to 18th-19th-century data, the coastal Koryak family was already economically self-sufficient at that time. Individual families owned boats, nets, and traps, which they were free to use at their own discretion, down to selling them to other families. But there were also cases where nets belonged collectively to related families.

Even by the time of the Revolution, social inequality was not sharply expressed among the coastal Koryaks. They lived predominantly in a subsistence, consumption economy, with fur as the only commodity for sale.

The situation among the Chavchuvens was quite different. Even in the early part of the 18th century, Krasheninnikov wrote about the wealth of individual reindeer-breeders. Thus, already there was sharp property differentiation among the reindeer-breeders at that time. The process of stratification became still more intensified in the 19th century in connection with the development of trade.

At the time of the Revolution, there were among the reindeer-breeders men of great wealth, who owned herds of thousands of reindeer. On the other hand, there were householders owning only 10-15 reindeer and therefore compelled to work for the rich as herdsmen. Very often, distant relatives of the owners also became herdsmen; in such cases, family relations served as a cover for the usual exploitation.

In exchange for his hard labor in tending the reindeer, the herdsman received from his master only meat for his food and skins for his clothing, with the quantity of the compensation dependent entirely on the will of the master. The encampment of the rich Koryak usually included several families of herdsmen entirely dependent on their master economically and subject to his will in everything. The herdsmen could not kill a reindeer for food without the master's permission, and therefore often went hungry. In addition to tending reindeer, they performed a variety of other tasks: prepared firewood, brought water, hunted fur animals. The rich reindeer-breeder disposed of the labor of the herdsman's family as well. The herdsman's wife and daughters processed the reindeer skins for the master, made thread of reindeer sinew, sewed clothing and boots of reindeer-skins, etc. It was difficult for a herdsman to leave his master. Although custom permitted the changing of masters (in the fall, when the season began), in reality this was difficult to accomplish. The chief obstacle was the "debts" which the herdsman had managed to incur with his master: during the year he obtained from the latter small quantities of tea, sugar, flour, cartridges, etc. The master was not bound to provide imported goods; he merely had to "feed" his herdsmen. For a year's work, the herdsman received a female reindeer. As a rule, each herdsman owned 5-6, and only occasionally 10 or more, reindeer, earned by several years of hard labor. Naturally, with such a small number of reindeer it was impossible to live independently.

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Among the reindeer-breeding Alyutortsy there were associations of families with small reindeer herds, bound by blood or affinal kinship. The typical correlation of reindeer in a herd owned in common by five households was: 5% + 10% + 20% + 25% + 30% = 90%. The other 10% of the herd usually belonged to sedentary relatives of the reindeer-breeders. Property inequality among the Alyutortsy was less pronounced than it was among the Chavchuvens. There were only a few cases where one of the co-owners in the association owned as much as 60% of the combined herd.

Thus, the backward forms of the Koryaks' subsistence economy fostered the preservation of communal relations among them.

The existence of clan relations among the Koryaks in the past is indicated by a number of aspects of their social life, and particularly by their family and marital ceremonials, which persisted into the first quarter of the 20th century. Among the survivals of clan organization we must note the custom of mutual assistance among related families, the custom forbidding outsiders to use the fire of an unrelated family, the residence (according to 18th-19th-century sources) of several related families in the same dwelling, the custom of vendetta, which survived until the early years of the 20th century, etc. In addition, the coastal Koryaks still retained traces of the institution of elders. In some of the villages there were persons called nym'elgen-an—"the guardian of the place," "the guardian of the past." This position could be held only by a man who was considered a descendant of the founder of the village. Each group of Koryaks headed by a nym'elgen-an had its own wooden image. In addition to the general designation of nym'elgen, the image also had its own name. Some of these names ("swallow," "duck") were of totemic character. Sacrifices were made to the images; they were "fed" and "dressed" in grass clothing.

Family relations at the end of the 19th century were based on patriarchal norms (patrilineal kinship, inheritance from father to son, patrilocal marriage). Along with this, there were survivals of matriarchy, the most distinct of which was the granting of children to the mother in case of divorce.

Among the remnants of extinct forms of group marriage were the surviving custom of the sororate, according to which a widower must marry the younger sister, younger cousin or niece of his dead wife, and the custom of the levirate, according to which a younger brother had to marry the widow of his older brother; in the absence of a brother, this duty devolved on the nephew or cousin of the dead husband. However, such survivals of group marriage as the Chukchi "association by wife" were already unknown among the Koryaks in the 18th century.

The most common method of contracting a marriage was by working for the wife. Under this custom, the groom had to work from 2-3 months to three years in the family of his future father-in-law, taking part in tending reindeer and other tasks. After the expiration of the work period, the groom performed the so-called ceremony of "catching the bride": the bride ran about in the house, and the groom had to catch her, tear her clothing, and touch her bare body. The bride's relatives present at the ceremony tried to hinder this in every way, beat the groom with twigs, pushed him away, and so on.

According to Koryak religion, the whole world was inhabited by a multitude of harmful beings—nin'vit's. The nin'vit's were invisible, but could become visible if they chose. They appeared to people in the form of anthropomorphic creatures, with huge ears, burning eyes (sometimes with one eye, sometimes with three), with long sharp teeth and a body covered with thick black fur. It was thought that the nin'vit's hunted and ate people by entering them and causing illness. To placate the nin'vit's, the Koryaks

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the White Guards occupied only the largest populated centers, the Soviet government in effect continued to exist in the uyezds. Representatives of the Revolutionary Committee directed the struggle of the local population against the White troops. Thus, a Red guerrilla unit was organized from among the Russians and natives (Koryaks and Itel'mens) of the Tigil'skiy Rayon. In pursuing the Whites, retreating to the Okhotsk coast, this unit crossed the entire territory of the present Koryak (National) Okrug by dog team in wintertime. Together with the Red Army unit which had occupied the city of Petropavlovsk-Kamchatskiy by this time (1922), the Russian-Koryak guerrilla unit took part in mopping up the remnants of Bochkarev's gang near the village of Nayakhan. Individual Whites who managed to escape from Nayakhan and Gizhiga were finished off by the Red Army unit with the direct participation of Koryak reindeer-breeders in the area of Korfa Bay.

The winter of 1922-23 marked the final establishment of the Soviet government on Koryak territory. The short rule of the Whites had been attended by open looting of the population; the reindeer-breeding Koryaks of Taygonos Peninsula suffered most of all, since the White units confiscated their reindeer for transportation and food. The representative of the White government in Petropavlovsk-Kamchatskiy granted Japanese capitalists the exclusive fishing rights within an area that included the present Koryak National Okrug. Japanese and American traders were also given the freedom to purchase furs from the natives.

During the early years of the Soviet regime (1923-1926), the uyezd, and later the rayon revolutionary committees had to do a great deal of work in order to overcome the grave effects of the civil war.

In 1930, after the First Congress of Soviets of Kamchatka, wide activity was launched in organizing local soviets, cooperatives and various socio-cultural institutions. Particular attention was given to the development of Soviet trade. New trading centers were established in a number of villages, where Koryaks were able to obtain essential provisions, hunting guns and ammunition. The establishment of fixed prices on furs and reindeer skins made it possible for the Koryaks to start improving their economic level.

A large role in raising the cultural level of the Koryak population was played by the cultural base opened on the Penzhina River in 1930 by the Committee to Assist the Peoples of the North. The establishment of an independent Koryak National Okrug (December 1930) stimulated the further successes of economic and cultural construction among the Koryaks.

Collectivization among the Koryaks, particularly among the nomadic reindeer-breeders, was conducted under conditions of class struggle. The wealthy Chavchuven reindeer-breeders destroyed large parts of their herds and did everything they could to interfere with the collective farms.

The remnants of primitive-communal relations which had masked exploitation at first impeded the unification of individual households into collective farms. The first forms of cooperative associations among the Koryaks were societies for the common herding of reindeer. Later, the principal form of association was the cooperative.

The development of collective farms entailed transition to sedentary life. The process of settling down was especially complex and difficult for the reindeer-breeders, both because of their traditionally nomadic existence, and because of the conditions of the reindeer-breeding industry itself; the change of pastures demanded frequent migrations. In the transition to sedentary life, this complex problem was solved as follows: pastures were assigned to individual collectives, and the tending and care of the herds were put in the hands of special brigades of herders, which accompanied the herds. The rest of the collective-farm

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members lived permanently in the villages, engaging in fishing and other work.

The work and life of the herders has also been organized quite differently from what was the case in the past. Each herding brigade has a yaranga. The brigade usually consists of 4-5 herders, a brigadier, a timekeeper and a woman "tent worker," whose duties include preparation of hot meals, mending clothes, and keeping the tent clean.

There are also new elements in the technique of pasturing. Especial stress is laid today on cultivation of new pastures and planned utilization of the old. The collective herd is distributed among various pastures, and an exact itinerary and timetable are set for the herd's migrations. For the purpose of guarding the herd and preserving the young, as well as for the better organization of pasturing and saving of labor, the herders today use riding horses in summer, and reindeer dogs in winter—a method entirely unknown to the Koryaks in the past. Various new methods in the organization and technique of reindeer-breeding are combined with expanded veterinary services. Energetic struggle is waged with epizootics, measures are taken to improve the breed of the reindeer, and so forth.

In 1947 an agricultural school for leading collective-farm personnel was opened in the village of Palana. This school trains specialists in reindeer-breeding—brigadiers, timekeepers, etc.

The collectives of the Koryak National Okrug own herds of many thousands of reindeer, and the productivity of the reindeer-breeding farms is rising. Thus, the Kirov collective (Tigil'skiy Rayon) increased its reindeer herd several times over during the postwar years. The incomes of the collectives in this branch of their economy have risen correspondingly.

In the coastal collectives, the principal occupation is fishing. The development of fishing collectives is closely connected with the development of the fishing industry in the Koryak National Okrug. During the Five-Year Plans, a large, technically well-equipped socialist fishing industry of nationwide importance has been created in the Koryak National Okrug. The establishment of industrial fishing has greatly affected the development and consolidation of fishing collectives.

The fishing cooperatives are served by the Motor-Fishing Stations (MRS), which have charge of motorized and motorless fleets. The MRS conduct activities to improve the fishermen's skills, teaching the Koryak collective-farm members new skills as brigadiers, motormen, etc. The chief fishing tools today, in place of the old primitive nets, are new and improved stationary, sweep and bag nets. The skin baydar has been entirely supplanted by motored and special motorless boats.

Along with the principal branches of activity, such as fishing and reindeer-breeding, the Koryak collectives are developing gardening and livestock-raising. Attempts to expand agricultural activities were made before the Revolution as well, but even among the sedentary Koryaks they produced no substantial results. The poorly worked earth gave low yields, and the crops often were killed by early frosts. Besides, the Koryaks had very inadequate knowledge of tending gardens or the use of agricultural tools. Livestock-breeding fared no better; the maintenance of livestock on green fodder all year lowered the milk yield of the cows to a minimum.

Gardening and animal husbandry began to develop among the Koryaks after 1930. A large role in this was played by Russian workers and the local Soviet intelligentsia, who helped the collective livestock-breeders and gardeners both by personal example and by teaching them. Quite often, Russian women came to the collectives and demonstrated methods of planting and preparing vegetables; they also taught the Koryaks how to tend

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231 264 342 Their huts are made much in the ſame manner as thoſe of other wandering people, but leſs than thoſe of the *Calmucks*. In the winter they cover them with raw deer-ſkins, and in the ſummer with tanned. They have no flooring or ſeparation within their huts; in the middle only are four little ſtakes driven, between which is their hearth. To theſe ſtakes they commonly tie their dogs, which frequently drag the victuals out of the kettles while it is dreſſing; and notwithſtanding their maſters beat them very ſeverely, they generally come in for a ſhare of every piece. A man muſt be very hungry to be able to eat with theſe people. Inſtead of waſhing their kettles or platters they give them to the dogs to lick, and the very fleſh which they tear from the mouths of the dogs they throw again into the kettles without waſhing it.

171 342 The *Tchukotſkoi* winter huts are much preferable to thoſe of the *Koreki*, being much warmer and more roomy. Several families live in the ſame hut, all having their proper benches, upon which deer-ſkins are ſpread, whereon they ſit or ſleep. Upon each bench a lamp burns day and night, for which they uſe fiſh-oil and a wick of moſs. They have an opening in the top, which ſerves for a chimney; however they are almoſt as ſmoaky as thoſe of the *Koreki*, but ſo warm, that in the coldeſt places the women ſit naked. The cloaths which they wear are made of rein-deer ſkins, not differing in the leaſt from thoſe of the *Kamtſchadales*, who purchaſe them from the *Koreki*.

171 291 233 352 262 574 They feed upon the fleſh of the rein-deer, in which they very much abound, ſome of the rich having ten or twenty thouſand; nay, one of the chiefs was ſaid to have one hundred thouſand: but yet they are ſo penurious, that they are ſorry to kill any for their own uſe, ſatisfying themſelves with ſuch as die naturally, or are killed by the wolves. Of this carrion, indeed, they have plenty; and they are not aſhamed to excuſe themſelves from entertaining travellers by telling them that none of their deer

deer are killed or have died lately

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deer are killed or have died lately. For particular gueſts, indeed, they will kill ſome of their ſtock, and at ſuch times only they have a hearty meal. They never milk the rein-deer, nor know any uſe of milk. They eat their fleſh for the moſt part boiled, and what they do not conſume immediately they dry with the ſmoke in their huts. One of their principal diſhes is called *yamgaya*, which is made thus; they put the blood of the beaſt mixed with ſome fat into its ſtomach or paunch, which they hang up and ſmoke. Our Coſſacks reckon this a great delicacy. Beſides, the *Koreki* eat every other animal except dogs and foxes. They uſe, in general, neither herbs, roots, nor barks of trees; but the poor feed on them in time of great ſcarcity; nor will any catch fiſh, except the deer-herds, and that very ſeldom. They make no proviſion of berries for the winter, but only eat them freſh in the ſummer. They think nothing can be ſweeter than cranberries beat up with the root ſaran and deer's fat. I had an opportunity of ſeeing one of their chieftains exceedingly ſurpriſed upon the firſt ſight of ſugar, which he took for ſalt; but taſting it was ſo pleaſed with its ſweetneſs, that he begged ſome pieces to carry to his wives: but, as he was not able to reſiſt the temptation of ſo delicious a rarity, he ate it all up on the road; and when he came home to his houſe, although he ſwore to the women that he had taſted ſalt ſweeter than any thing he had ever taſted before, yet they would not believe him, inſiſting that nothing could be ſweeter than cranberries with deer's fat and lilly-roots.

They ride only in the winter time on ſledges drawn by rein-deer, but never mount upon their backs in the ſummer, as they ſay the *Tunguſi* do. Their ſledges are made about a fathom long: the ſides are about four inches thick, but rather thinner at the fore part, where they are bent upwards: the two ſide-pieces are joined together by ſmall pieces of wood. They yoke two

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492 deer before every ſledge. The harneſs is ſomewhat like that they yoke two
uſe for reins of the dogs; the harneſs of that deer which is on the right ſide being faſtened to the left ſide of the ſledge, and that of the deer on the left ſide to the right ſide of the ſledge. Their bridles and reins are ſomething like the collars of horſes. Upon the deer's forehead they have four little bones, made like teeth, but very ſharp, which are uſed as bits to pull them in when they run too faſt; for theſe ſharp bones piercing the ſkin ſtop them at once. The right hand deer only has theſe bones; for if that is ſtopped, the deer upon the left has not ſtrength to run away. The drivers ſit near the fore part of the ſledge; and if they want to turn to the right they only draw the rein, but when they would turn to the left they beat the right ſide of the deer. They drive them with a goad, which is about four feet long, having a ſharp piece of bone at one end, and at the other a hook: with the bone they prick the deer to go forwards, and with the hook they lift up the harneſs when it happens to fall down.

Travelling with rein-deer is much ſwifter than with dogs: good cattle will go 150 verſts a day; but you muſt take care to feed them frequently, and to ſtop often to allow them to ſtale; for you may kill them in one day, or at leaſt make them good
492 for nothing. Deer that are uſed for draught are bred to it, as
233 horſes. The male they geld, which is done by piercing the ſpermatick veſſels, and tying them tight with thongs. The rein-deer which the *Koreki* uſe for draught feed along with the others; and when they want to part them, they drive them all home; then crying aloud in a particular manner, the draught cattle ſeparate themſelves from the reſt; and if any of them ſhould remain, they are beat moſt unmercifully.

233 The ſettled *Koreki* have likewiſe ſome rein-deer, but very few, and thoſe ſuch as they only uſe for drawing. The *Tchu-*

kotſkoi

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kotſkoi have great herds, and yet feed for the moſt part upon ſea animals. The *Koreki* would be miſerable if they wanted the rein-deer: for they know no way of keeping themſelves alive, as they do not underſtand how to catch fiſh; and if they did, could not ſoon provide themſelves with boats, nets, or dogs: ſo that the poorer ſort are employed by the richer in feeding their deer, for which they receive meat and cloaths; and if they have any ſmall ſtock of their own, they are allowed to feed them with their maſter's cattle.

The rein-deer *Koreki* exchange their deer and deer-ſkins with the neighbouring people for the very fineſt furrs, of which they have always a large ſtock by them.

The religion of the *Koreki* is more abſurd than that of the *Kamtſchadales*, at leaſt that little chief, of whom I had my information, ſeemed to have ſcarce any idea of a God; they ſeem more to reſpect evil ſpirits, which, according to their opinion, inhabit the rivers and woods: this reſpect ſeems to be owing to their fear. The ſettled *Koreki* acknowledge for their God, the *Kuta* of the *Kamtſchadales*. They have no fixt time of worſhip or offering ſacrifices; but, whenever they pleaſe, they kill either a rein-deer or a dog, which they fix upon a ſtake, turning its face towards the eaſt, leaving only the deer's head and tongue upon the ſtake. They themſelves do not know to whom they make theſe ſacrifices, and only uſe theſe words, *Vio coing yack ne la lu, ban be vau*; that is, This to you, and may you ſend us ſomething that is good. The time of ſacrificing is when they are going to paſs any river or waſte, which they think the devils inhabit; then they kill one of their deer, and eating the fleſh, they faſten the bones of the head upon a pole, which they fix oppoſite to the habitation of the ſpirits. When the *Koreki* are afraid of any infectious diſtemper, they kill a dog, and winding the guts upon two poles, they paſs between them.

During

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amidſt all their misfortunes, with the pleaſure of having once in their life made a delicious meal.

Amongſt all theſe barbarous nations, excepting the *Kamtſchadales*, theft is reputable, provided they do not ſteal in their own tribe, or if done with ſuch art as to prevent diſcovery; on the other hand, it is puniſhed very ſeverely if diſcovered, not for the theft, but for want of addreſs in the art of ſtealing. A *Tchukotſkoi* girl cannot be married before ſhe has ſhewn her dexterity in this way.

Murder is not looked upon as a great crime unleſs it be in their own tribe, and then the relations of the murdered generally revenge it, but no one elſe takes any notice of it.

In their marriages the rich match with the rich, and the poor with the poor, with little regard either to beauty or any other accompliſhment. They marry for the moſt part into their own family, ſuch as with a firſt couſin, an aunt, or mother-in-law; and, in ſhort, with any relation except their own mother or daughter.

The ceremonies of courtſhip are the ſame as among the *Kamtſchadales*. Although the bridegroom ſhould be very rich, yet he is obliged to ſerve three or five years for his bride; during which time they allow them to ſleep together, though the form of catching the bride ſhould not be performed, which they leave 'till the marriage be celebrated, and that is done without any great ceremony. They have ſometimes two, and ſometimes three wives, whom they keep at different places, giving them a herd of deer and a keeper. Their greateſt pleaſure is to go from place to place and examine their cattle; and it is ſurpriſing that the *Koreki*, notwithſtanding their herds are ſo numerous, and they are quite ignorant of arithmetick, can immediately diſcover the leaſt loſs, and even deſcribe all the marks of the deer that is miſſing.

They have a great fondneſs for their children, and breed them up from their infancy to labour and oeconomy. Thoſe that

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/335 cont./ It is generally believed that the sedentary Koryak in former times were reindeer nomads and only after the loss of their herds settled along the seacoast in order to live on hunting and fishing -- a change that has to some extent also taken place and is still taking place among the Chukchee (3). But between the sedentary or coastal Chukchee

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3. Krascheninnikof (op. cit., Vol. II, p. 204) thought that the sedentary Koryak had formerly been reindeer nomads. Erman (Reise um die Erde /Journey around the World/ Part 1, "Histor. Bericht. /Historical Information/," Vol. II, Berlin, 1838, p. 423, note), Ditmar (Bull., etc., op. cit., pp. 103, 127; Mél., op. cit., pp. 7, 36), and Kennan (op. cit., p. 159) express themselves similarly. According to Ditmar, this impoverishment took place a long time ago, as legend has it, during the battles with the Chukchee. Ssarytschof /Sarychev/ (Putesh. po Sievero-vost. chasti Sibiri, Ledov. moriu i Vostochn. Ok. /Travels in the Northeastern Parts of Siberia and the Arctic and Eastern (Pacific) Oceans/, Pt. II, p. 105) thought the same about the Chukchee, but confused the sedentary Chukchee with the Namollo. There is no doubt but that the true coastal Chukchee arose and are still arising from nomads of the same tribe who have lost their reindeer, as is stated by Wrangell /Vrangel'/ (Put. po siev. ber. Sib. i po Ledov. moriu /A Voyage along the North Coast of Siberia and through the Arctic Ocean/, Pt. II, p. 335), Ditmar (loc. cit.) and others.

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and the sedentary Koryak there is the great difference that the latter are in fact sedentary and have permanent winter and summer houses, while the former, even after the loss of their reindeer and after their settling down along the seacoast, have